Heating Piping & Air Conditioning

THIS ISSUE IS IN TWO PARTS — PART 2

SEPTEMBER 1960

. . . for CONSULTING ENGINEERS · MECHANICAL (Heating, Piping, and Air Conditioning) CONTRACTORS ENGINEERS WITH PLANTS AND BIG BUILDINGS

HEATING, PIPING & AIR CONDITIONING'S

Trade Literature Supplement

HOW TO USE THIS INFORMATION

Catalogs, bulletins, and other helpful data available to you from advertisers in Heating, Piping & Air Conditioning are briefly described in this supplement. Each description is numbered. Just circle the numbers for those you want on the handy postage-paid cards on pages 2-31 or 2-33. Your requests will be passed along to the manufacturers whose literature you ask for.

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Air Distribution, Air Diffusion, Ductwork, Grilles, Etc.

1 Access Doors, Louvers, Dampers

Bulletin 120-160-ACC covers insulated duct access doors; adjustable and stationary louvers; air control fire dampers; back pressure dampers; manual, automatic and motorized wall and horizontal shutters. — Ammerman Co., Inc.

2 Air Diffuser with Diffusing Vanes

Thirty-two page catalog contains simplified methods for selecting, sizing and applying "Agitair" custom-made air diffusers with built-in diffusing vanes. A few of the unlimited air pattern arrangements are shown, also areas of triangles and trapezoids, table of square and rectangular areas (in sq ft) and typical installations.—Air Devices Inc.

3 Air Diffusers

Bulletin K27-A illustrates and describes linear and rectangular series air diffusers, gives dimensional drawings for several types in each series, and complete selection and performance data, with list of agents. Offered in three series: square, panel, long slotted units combine best air distribution and modern styling.—Connor Engineering Corp.

4 Air Diffusion Equipment

Fifty-eight page catalog 1-59 contains complete application and specification data on Waterloo's line of return and supply registers, extruded aluminum "Airline" grilles, removable core grilles, volume control dampers and door ventilators. Each type of unit is well illustrated and keyed in color for quick reference. — Waterloo Register Co., Inc.

5 Air Distribution Equipment

Consolidated catalog covers round, square, rectangular and linear diffusers; grilles and registers; stamped metal grilles; and high pressure all-air units. Complete dimensional and engineering data included.—Tuttle & Bailey Div. of Allied Thermal Corp.

6 Air Duct

Twelve page brochure TR-198A describing and illustrating the use of Johns-Manville asbestos-cement "Transite" air duct in loop, radial and lateral types of perimeter heating-cooling systems. Gives job data, system design diagrams, facts and photographs about factory-made and segmental fittings, methods of cutting, assembling etc. — Johns-Manville Sales Corp.

7 Air Turning Devices

"Uni-Flo Airturn" is a factory-fabricated, ready-to-install air turning device designed to give sweeping radius performance to the square duct corner. In addition to describing and illustrating it, catalog F-7912-1 includes pressure loss data to permit determining elbow losses throughout system, sizing and ordering information. — Barber-Colman Co.

8 All-Air High Velocity Units

Twenty-four page catalog HV-70 on all-air high velocity units for air conditioning, available in many types for providing draftless air diffusion. Advantages are briefly discussed, typical applications described, and dimensions and performance data given. A typical specification is included, as are pictures of high velocity installations.—Anemostat Corp. of America.

9 Ceiling Diffusers

Catalog 34 describes eight different styles of round diffusers in all of the standard sizes, and 22 different styles in the square and rectangular units in 66 different sizes. Obtainable either in steel or aluminum.—Universal Diffuser Corp.

10 Central Station Air Conditioners

York type A central station air conditioners are factory assembled fan-coil units which combine all of the components necessary for summer cooling, winter heating or year 'round conditioning when refrigeration and heat are supplied from a central plant source. They provide air circulation, cooling, dehumidifying, heating, humidifying and filtering.—York Div. of Borg-Warner Corp.

11 Circular Air Diffusers

Twenty-eight page catalog CI-70 on circular air diffusers, with introductory page on principles and definitions, information on selection, and with dimensions and performance data for supply diffusers, supply and extract diffusers, adjustable supply diffusers, inductive diffusers, diffusers for central systems, for unit heaters, and diffusers with lights. Specifications included.—Anemostat Corp. of America.

12 Combination Light and Air Diffuser

Barber-Colman and Day-Brite Lighting, Inc. have compiled a twenty-four page catalog describing a new combination light and air diffuser. The book (F-9768) briefly gives a history of the evolution

of lighting and air distribution. Accurate performance data, selection charts and background sound level tables are included. — Barber-Colman Co.

13 Diffuser for Round Duct

The "Duct-D-fuser" distributes air in a planned pattern directly from round duct wherever exposed duct is used for industrial air distribution. Installs as simply as a coupling and can operate directly from high pressure systems without pressure reducing equipment.—United Sheet Metal Co., Inc.

14 Diffusers

"Silentair" series S square, rectangular and continuous diffusers together with available accessories are described in bulletin S-401. Extensive application data is included in revised, more easily readable form together with roughing-in dimensions for various styles of frames and mountings. — General Air Products Corp.

15 Dual Duct Air Conditioning

Guide details features of high velocity dual duct air conditioning systems and shows typical arrangements for architects and consulting engineers.—Buensod-Stacey Corp.

16 Dual Duct Air Conditioning Air Mixing Units

Sixteen page bulletin DD-6 gives information on dual duct air mixing units for use in high or low pressure dual duct air conditioning systems with supplementary items such as enclosures, distributing headers, high velocity outlets, etc. — Buensod-Stacey, Inc.

17 Electrolytic Zinc Coated Steel Sheets

Eight page bulletin 572 on "Weirzin" electrolytic zinc coated steel sheets describes the many uses this product has for painted cabinets, baseboard heating panels, space heaters, etc. Recommended for unpainted parts, painted parts, and low budget painted parts.—Weirton Steel Co.

18 Extruded Aluminum Grilles

Technical catalog LD-100 contains performance data, selecting and sizing methods of "Agitair Decoraire" extruded aluminum grilles in 12 sizes with three degrees of deflection (0, 15 and 25 deg) and in widths of 1½, 2, 3, 3½, 4, and 6 in. Catalog also illustrates a group of modern design extruded aluminum borders. — Air Devices Inc.

19 Fabricated Grilles

Bulletin 43 illustrates, describes Diamond heavy-duty bar type grilles — all steel or all aluminum — designed and built to give best possible combination of strength and high open area. Widely used in modern schools, colleges, hospitals, ocean liners, sports arenas, etc. Built to order (no standard sizes) in any required rectangular size or shape. — Diamond Mfg. Co.

20 Fiber Duct

Four page brochure describes "Sonoairduct", a fiber duct for slab-on-ground perimeter heating and combination heating and cooling installations. Included are suggested methods of installation, thermal conductivity table, and sizes.—Sonoco Products Co.

21 Flexible Air Conditioning Ducts

Catalog 10-19 describes use of "Thermaflex" flexible ducts in high and low pressure air conditioning. Complete engineering information is presented on constructions, sizes available, specifications, air flow characteristics of ducts.—Flexible Tubing Corp.

22 Galvanized Sheets

Sixteen page booklet describes "SofTite Cop-R-Loy" galvanized sheets for air conditioning ducts and other applications. Detailed description, how and where used, manufacturing process, and other subjects are covered and photographs included.—Wheeling Steel Corp. and Wheeling Corrugating Co.

23 Grilles

Catalog 36, 100 pages (AIA File No. 30-E) illustrates, describes Diamond architectural grilles, stamped out of steel, aluminum, bronze or any other commercial metal, in any thickness up to ¼ in. Shows unit openings actual size, gives complete working data. Illustrates, describes other Diamond products for heating, ventilating, air conditioning. — Diamond Mfg. Co.

24 High Velocity Acoustic Control Units

New all air, dual duct, high velocity acoustic terminal control units achieve simplicity and accuracy in constant volume control by valves directly connected to pneumatic motors. Binding, lost motion, need for maintenance, cleaning and lubrication eliminated.—Carnes Corp.

25 Long Strip Diffusers

Long strip architectural type of diffuser for high wall, ceiling, soffit and sill applications combines the better features of the round and square ceiling type diffusers with a neat, inconspicuous appearance of a long, narrow slot.—Universal Diffuser Corp.

26 Mixing Boxes

Catalog HV-100 illustrates and describes "Agitair" O series one motor constant volume "Hi-Vel" mixing boxes with noise attenuator units. Complete performance data in tabular form, dimension drawings and specifications are included.—Air Devices Inc.

27 Motorless Valve Attenuator

Bulletin K-45 describes new Connor "Kno-Draft" series 45P valve attenuator, which uses no motors or linkage of any kind and is designed for use in dual duct high velocity air distribution systems. Features are listed, function explained and diagrammed, along with performance data and dimensions.—Connor Engineering Corp.

28 Perforated Ceiling Diffusers

Catalog TPD-60 pictures and describes complete line of TCS and TCR series of square and rectangular perforated ceiling diffusers including engineering, application and selection data. These supply and return units are available for all types of ceiling mountings including recessed, surface, inverted T-bar, etc.—Titus Mfg. Corp.

29 Pipe Insulation

Eight page booklet describes the characteristics and application data for one piece molded "G-B Snap-On" pipe insulation of fine glass fibers. Application specifications cover heating, plumbing, insulation of valves and fittings, cold piping, dual temperature and outdoor piping. Thickness charts, and information about sizes, packaging and available jackets are also included in booklet. — Gustin-Bacon Mfg. Co.

30 Plastic Modular Diffusers

Carnes plastic modular diffusers designed for any type of ceiling construction (new or existing) and are especially adaptable to tile and metal pan suspension systems. Basic diffuser faces are sized to replace one or more standard tiles and are provided with frame modifications and panel assemblies dimensioned for exposed suspension.—Carnes Corp.

31 Registers and Grilles

Catalogs and bulletins cover "Fabrikated" solid bar construction registers and grilles made of steel and aluminum for heating, ventilating and air conditioning.—Independent Register Co.

32 Registers and Grilles

Catalog 39 describes complete line of registers, grilles and accessories, both in steel and extruded aluminum.—Universal Diffuser Corp.

33 Registers, Grilles, Diffusers

Complete line of high quality products for any commercial or residential heating and or cooling operation. Specializing in non-standard sizes and designs. Heavy gauge steel or aluminum in many eye appealing designs; air flow in any directional pattern.—A & A Register Co.

34 Registers, Grilles and Diffusers

Sixty-eight page catalog A for 1960 on air conditioning registers, air conditioning grilles, air conditioning diffusers, pressure dampers and accessories. The index includes products for residential and commercial applications, residential-gravity, and commercial and industrial.—United States Register Co.

35 Regulators, Registers, Grilles and Diffusers

A complete line of manually controlled surface, concealed, high pressure, floor-line, remote control and air-split regulators; dampers; adjustable air conditioning registers, grilles and baseboard diffusers, for every type of heating and air conditioning installation. — Young Regulator Co.

36 Sheet, Roll, Strip

Thirty-two page stock list catalog on copper and brass products gives sizes of sheet, roll, strip, rod, wire, tubing, pipe, roofing materials and other related products with applicable gauge and weight data.—C. G. Hussey & Co. (Div. of Copper Range Co.)

37 Spiral Duct and Fittings

Light, rigid spiral "Lockseam" pipe for high pressure, high velocity air distribution ducts comes in long lengths for economical installation in sizes 3 to 22 in. diameter and are made in galvanized steel, aluminum, stainless and perforated metals. Matched welded fittings specially designed for low friction loss in high velocity systems.—United Sheet Metal Co., Inc.

38 Square Air Diffusers

Sixteen page catalog SQ-70 on square air diffusers, with discussion of principles and definitions, information on selection, specifications, and dimensions and performance data for supply diffusers, induction diffusers, adjustable supply diffusers, panel type diffusers, and supply and extract diffusers.—Anemostat Corp. of America.

39 Square and Rectangular Ceiling Diffusers

Twenty page illustrated catalog TMD-658 gives comprehensive engineering, performance and selection data on complete line of series TMD square and rectangular ceiling diffusers. Units include those for standard ceiling installations, drop frame installations, tile ceiling and surface mountings.—Titus Mfg. Corp.

An engineer or contractor obviously can't find *all* the information he needs in catalogs, bulletins and manuals — but he *can* find a great deal of the information that he must have. Manufacturers of the hundreds and hundreds of products used in heating, piping and air conditioning offer you a wealth of useful data.

40 Supply and Return Grilles and Registers

Thirty-six page catalog GL-159R illustrates and gives comprehensive engineering, performance and selection data on complete line of supply and return grilles and registers. Includes data on gymnasium and door grilles and full line of accessories, including volume controllers and extractors. —Titus Mfg. Corp.

41 Thermoplastic Sheets

Thermoplastic sheets can be used in production of ducts or enclosures in fire retardant, self-extinguishing materials as well as those that do have specific chemical resistance.—Southern Plastics Co.

42 Zinc Coated Steel Sheets

Booklet describes the "Weirkote" continuous line zinc coated steel sheet used for air conditioning cabinets, furnace wrapper sheets and many other fabricated parts for both air conditioning and heating installations as well as duct work.—Weirton Steel Co.

Air Filters & Air Cleaners

43 Air Filter Gages

Bulletin C-1 presents the standard Dwyer line of three types of gages, including architect-engineer specification data. The air filter gages provide a continuous check on the efficiency of all types of filters which is necessary for maximum overall economy.—F. W. Dwyer Mfg. Co.

44 Air Filters

Eight page bulletin describes Air-Maze complete line of oil bath, oil wetted dry type, panel, electronic and other types of air filters. Lists design and research facilities available for tailoring a filter to specific requirements and describes filters of various types for handling volumes of 20 to 60,000 cfm.—Air-Maze Corp.

45 Air Filters

Brochure describes new Goodyear "Pliotron" air filters and explains why you get cleaner air with this type of filter.—The Goodyear Tire and Rubber Co.

46 Air Filters

Catalog shows graphs, charts, and other technical data on "Dust-magnet" electrostatic air filters with "Poly-mag 80." — Stoddard Industries, Inc.

47 Air Filtration

Forty page looseleaf brochure, "Micromat System of Air Filtration," discusses air pollution, principles of air filtration and the application of the various types of "Micromat" synthetic fiber media in commercial, industrial, institutional and residential installations, with six media types included.—Microtron Corp.

48 Automatic Air Filters

Bulletins 819 and 822 on vertical and horizontal (respectively) roll-away type, automatically controlled air filters that clean the air at low cost per cubic foot. Listed by Underwriters' Laboratories. They deliver dependable automatic performance with minimum of maintenance attention; delivered to job site fully assembled.—Continental Air Filters, Inc.

49 Cutting Air Conditioning Costs

Bulletin 76-8980, "A New Formula for Cutting Air Conditioning Costs," describes how original equipment and operating costs for air conditioning can be cut by installation of Honeywell's two-stage air cleaning system, the electronic air cleaner and the activated charcoal filter. Basis is the reduction of outside air requirements.—Minneapolis-Honeywell Regulator Co.

50 Disposable Air Filters

Farr HP high efficiency, strainer type filters developed to operate at lowest pressure drop while providing highest efficiency and dirt holding capacity described in bulletin B-1300-4. The deep pleats of media provide large area within compact, pre-formed filter cartridge. Three interchangeable HP filter cartridges available to meet varying efficiency requirements. — Farr Co.

51 Dry Washable Filters

Special bulletin describes Air-Maze P-61 dry washable air filter panel which incorporates extended area design with low pressure loss and high arrestment of airborne dirt as features.—Air-Maze Corp.

52 Filter for Exhaust Systems

Product data sheet 108 describes new self-contained "Glove Box Absolute" filter designed for easy installation in exhaust systems. Integral box design prevents bypass and loss of accumulated contaminants during filter change. Guaranteed 99.97 percent efficient on 0.3 micron particles.—Cambridge Filter Corp.

53 High Velocity Air Filters

Bulletin 423 describes "E-Z-Wash" high velocity all-metal air filter available in lacquered steel or aluminum. Offers high efficiency with low resistance. Functions with satisfaction at face velocities between 350 and 600 fpm. "E-Z-Oil" aerosol bombs available for re-oiling.—Continental Air Filters, Inc.

54 High Velocity Panel Air Filters

The Farr type 44 panel filter described in bulletin B-100-2B is all metal cleanable high velocity (350-690 fpm) viscous impingement filter, constructed of alternate layers of flat and crimped screen wire cloth coated with oil base adhesive. For ventilating and air conditioning, as well as paint, moisture, and grease elimination. — Farr Co.

55 Prefilter and Filter Unit

Product data sheet 136 describes new combination frame incorporating an "Aerosolve" filter as a prefilter and an "Absolute" filter as the final air cleaner in a single compact unit. Extends life of "Absolute" filter and lowers installation and maintenance costs.—Cambridge Filter Corp.

56 Renewable Media Air Filter

Traveling renewable media air filter that renews the media through manual operation described in bulletin B-1400-6. Designed to operate in pressure differential range from 0.3 to 0.6 in. of water, and from 350 to 500 fpm, the Farr "Manual Roll-Kleen" was developed for high performance, low cost installation. — Farr Co.

57 Space Filters

Eight page bulletin 1505-5 on new "M-S-A Ultra-Aire" space filters with replaceable filter elements, constructed without separators and without heavy integral frame, describes features and advantages, sizes and shapes, performance and installation. Widely used to remove bacteria and prevent product contamination.—Mine Safety Appliances Co.

58 Synthetic Fiber Air Filters

Bulletin 431 on "Dycon" air filters which have graded synthetic fibers bonded into wool-like blanket, supported in aluminum frame, remove and retain even very fine dust particles from air stream. Dust collected throughout entire depth of media. Flushing with cold water restores filter to original resistance and dust holding capacity. Blanket can be replaced eventually. — Continental Air Filters, Inc.

59 Washable Air Filter

Four page brochure gives properties and performance data of "Microfoam" washable plastic air filter, a lightweight, corrosion resistant filter medium with high efficiency and dirt-loading capacity and minimum air flow resistance, for use with or without viscous adhesive.—Microtron Corp.

Atomizing & Spray Nozzles

60 Atomizing and Spray Nozzles

Catalog 5900 contains complete descriptions and pertinent data on spray nozzle selections for refrigeration and air conditioning requirements.—Binks Mfg. Co., Cooling Equipment Div.

61 Industrial Spray Nozzles

Twenty page catalog I covers general industrial spray nozzles for all types of spraying applications — humidifying, gas scrubbing, wax coating, chemical processing, cooling towers, spray drying, re-cooling, etc.—Monarch Mfg. Works, Inc.

62 Oil Burner Nozzles, Burner Accessories

Twelve page catalog O covers both domestic and industrial oil burner nozzles, oil burner air mixing equipment, pressure regulating valves and line strainers.—Monarch Mfg. Works, Inc.

63 Spray Nozzles

Complete catalog describes full line of involute type spray nozzles for air conditioning, water recooling and general industrial spray applications. Specifications and many application suggestions are given.—Yarnall-Waring Co.

A wealth of information and data available to consulting engineers, contractors, and engineers with plants and big buildings is represented by the over 700 catalogs, bulletins and manuals described in this supplement to Heating, Piping & Air Conditioning. Use the reply cards on pages 2-31 and 2-33, to request your copies.

Cements, Adhesives & Tapes

64 Adhesives for Insulation

Four page catalog contains basic information on a variety of adhesives for bonding high and low density insulation materials to sheet metal ducts; both solvent types and water dispersed adhesive products included. Data on a duct seam sealer for use on high pressure systems is covered in catalog. —Minnesota Mining & Mfg. Co., Adhesives, Coatings & Sealers Div.

65 Color Code Identification and Pipe Sealant

Leaflet P-PPCCL describes "At-a-glance" color coding for pipe and duct systems. Also pipe sealing.—Minnesota Mining & Mfg. Co., Tape Div.

66 Corrosion Control for Buried Piping

"Corr-Prev" tape coating system is combination of primer, tape, overwrap and machine rental designed for the user of products for corrosion control of buried piping structures.—Chase & Sons, Inc.

67 Duct Liner Adhesive

A duct liner adhesive with a reclaimed rubber base, "Tuff-Bond" M-102-H, is strong bonding, waterproof, of brush or trowel consistency and particularly formulated for applying duct liner and similar insulation to the interior or exterior of sheet metal ducts and can also be used for bonding porous and non-porous materials to themselves.—Goodloe E. Moore, Inc.

68 Duct Liner Adhesive

A duct liner adhesive, "Tuff-Bond" No. 6, meets interim federal standards 00136, has been developed to fill the need for a non-inflammable duct adhesive which would be fire resistant when dry and non-flammable when in the wet state. It has a synthetic rubber base and is off-white color.—Goodloe E. Moore, Inc.

69 Insulation Adhesives and Coatings

Four page "Mira-Data Sheet" 11 lists Miracle adhesives and coatings for insulation and includes a chart for selecting adhesives for each type of insulation.—Miracle Adhesives Corp.

70 Plastic Electrical Tape

Envelope stuffer describes Permacel 29D, an electrical grade vinyl plastic tape, 7 mils thick, 10,000 volts dielectric strength, waterproof, oil and acid resistant that has high hold adhesion and stays anchored firmly to irregular surfaces.—Permacel.

71 Plastic Tapes

General use booklet P-PTPFR describes "Scotch" brand plastic tapes for sealing, masking, coding, lane marking, etc.—Minnesota Mining and Mfg. Co., Tape Div.

72 Tapes

Bulletin covers friction tape; electrical tape; rubber, neoprene and butyl splicing tapes (electrical insulating tapes).—Chase & Sons, Inc.

73 Tapes, Adhesives, Dispensers

Twelve page booklet lists the complete Permacel product line of pressure sensitive tapes, adhesives, dispensers and refinishing supplies, along with product numbers, descriptions, technical data, uses, and government specification qualifications. —Permacel.

74 Thread Sealant

Ribbon dope thread sealant, a self-lubricating, chemically inert, non-toxic pipe dope in dry, ribbon form can be used over a temperature range of −450 to +500 F. Properties and advantages of sealant, are described in envelope stuffer.—Permacel.

When you make use of the handy reply cards on pages 2-31 and 2-33 to ask for copies of the catalogs, bulletins and other data reviewed here, please type or print your name and address clearly so that the information you want can be sent you without delay. And don't forget to include your name and address on the card! Some of the cards have been returned to us without this essential information.

Controls & Instruments

75 Adjustable Angle Industrial Thermometer

Industrial thermometers which may be adjusted to the required angle on the job, for pipe lines, tanks and air ducts, are described and illustrated. Thermometer test wells are also shown.—Moeller Instrument Co., Inc.

76 Air Adjusted Pilots for Pressure Control

Response curves, application diagrams and selection data for new series of pressure pilots for control in vacuum range. Remote adjustment air control as well as complete specifications for air loaded pressure pilots described in bulletin which is identified as S.E.M. 9.—Spence Engineering Co., Inc.

77 Air Conditioning Control Panel

Bulletin 76-8470, "Automatic Living," describes and illustrates Honeywell's new "Weather Station", distinctive residential panel which provides central source of information on indoor temperature and humidity, outdoor temperature, barometric pressure, time and condition of filter, along with control of heating, cooling, fan, temperature and night setback.—Minneapolis-Honeywell Regulator Co.

78 Air Conditioning, Refrigeration Controls

Air conditioning and refrigeration catalog covers extensive line of automatic controls ranging from thermo-expansion valves for air conditioning and refrigeration to control systems including room thermostats, master control panels, relays, contactors, magnetic valves, etc., for residential, commercial and industrial air conditioning.—General Controls Co.

79 Air Control Temperature Regulators

Cascade control with air signal to pressure regulator modulates steam flow to meet wide-ranging demands of heat exchangers. Wide adjustable temperature ranges, fast response, low air consumption described in bulletin which is identified as S.E.M. 9.—Spence Engineering Co., Inc.

Over 700 catalogs, bulletins and other publications available to you on request are described in this supplement to Heating, Piping & Air Conditioning. Forty-six of them fall under the general classification of "Controls & Instruments."

There are 30 such general classifications, as indexed on the front cover of this supplement. Each of the over 700 items grouped within these broad classifications also has its own title, for your convenience in finding the literature you want.

80 Automatic Controls

Automatic controls systems guide, F-8944, for consulting engineers discusses electronic control systems and gives a selection guide for designing various types of automatic systems for air conditioning, heating and ventilating.—Barber-Colman Co.

81 Automatic Controls

Fourteen page performance test report on an electric unit ventilator controls installation in Zion, Ill., tells of the advantages gained through ratio room and discharge control for accurate control of room temperature. Contains photographs and charts.—Barber-Colman Co.

82 Automatic Controls

Unit ventilator control application manual details a line of control systems for hot water, steam, gas fired and electric unit ventilators and shows actual control applications covering all makes and models marketed by major unit ventilator companies.—Barber-Colman Co.

83 Automatic Zone Valves

Four page bulletin 1065-D14 describes new type ZV automatic valve for zone control of hot water, steam and radiant heating systems. Designed for heating and cooling applications using fan coil units, to provide individual control of room temperature. Thermostat actuated valve responds to temperature and controls circulator or burner.—Sarco Co., Inc.

84 Combustion Safeguard Control Centers

Twenty page bulletin C11 describes nine custom-engineered control centers and systems for combustion safeguard and automation. The starting sequences and design data are tabulated for each system and range up to a three boiler system with a combined steam flow of about 200,000 lb per hr.—Webster Engineering, Div. of Midland-Ross Corp.

85 Contact Pyrometer

Bulletin 4257 gives complete details on the "Alnor Pyrocon", a contact pyrometer for quick, accurate temperature readings of flat or curved, moving or stationary surfaces.—Illinois Testing Laboratories, Inc.

86 Control Valve

Squires "Valvatrol" designed for adjustable slow opening (up to 30 min if desired) to eliminate water hammering; fast, positive closing (from 4 to 40 sec, depending on valve size) to prevent temperature over-ride, provides even distribution of heat without zoning or orificing. Provides precise pressure reduction, controls building or process heat.—The C. E. Squires Co.

87 Dial Thermometers

Described and illustrated are 3 and 5 in. bimetallic dial thermometers and sockets, flanges and hubs for pipe line, tank and air duct applications.—Moeller Instrument Co., Inc.

88 Dial Thermometers

Catalog 205 describes dial thermometers, the supertherm line, 4½, 6 and 8½ in. mercury, gas, organic liquid or vapor actuation and available in choice of four case styles, with direct or remote design, adjustable angle. Also describes temperature switches and alarms.—United States Gauge Div., American Machine & Metals, Inc.

89 Direct Reading of Air Velocities

Bulletin 2448 gives complete detailed information plus illustrations on the "Alnor Velometer" used for instant direct reading of air velocities in heating and air conditioning.—Illinois Testing Laboratories, Inc.

90 Eccentric Valves

Eight page bulletin 110 describes the eccentric principle under which DeZurik valves are designed. It also lists the dimensions, wide variety of materials, etc., of the manually-operated DeZurik valves used on air conditioning installations.—DeZurik Corp.

91 Gages and Controls

Complete gage and control catalog contains illustrations, prices and full details on Dwyer "Magnehelic" gages, manometers, air velocity meters, air filter gages, pitot tubes, pressure actuated switches, flow meters, combustion testing instruments. Diagrams, conversion curves, other technical data included.—F. W. Dwyer Mfg. Co.

92 Gauges and Needle Valves

Catalog 76-G lists the entire line of Marsh gauges for all types of industry, including heating. Detailed listings insofar as ranges and sizes, as well as line drawings giving roughing-in dimensions of all of the gauges shown, are included.—Marsh Instrument Co., Div. of Colorado Oil and Gas Corp.

93 Gauges, Testers, and Barometers

Catalog 300B, 112 pages, contains complete technical and how-to-order information on "Ashcroft" comprehensive selection of indicating, recording, pressure, vacuum, combination and compound gauges, gauge testers, mercury column pressure and vacuum gauges, absolute pressure and U gauges, and mercurial barometers.—Manning, Maxwell & Moore, Inc.

94 Heating, Combustion and Smoke Controls

Catalog describes and illustrates electronic weather control, heat recorder and totalizer, electronic combustion and smoke control, "Smoke-Eye" indicating smoke alarms, zone heat control, "Varivalve" vent valve, "Thermovalve" thermostatic radiator air valve, "Vari-Quick" vent valve, motorized valves.—Heat-Timer Corp.

95 Heating Controls

Catalog covers advanced line of automatic controls for applications as domestic/commercial gas fired, oil or coal, warm air, hydronic and electric systems. Appliance controls for water heaters, ranges and washer/dryers.—General Controls Co.

FOR YOUR CONVENIENCE

Use the handy postage-paid reply cards on pages 2-31 and 2-33 to request your copies of the trade literature reviewed here.

96 Industrial Control Instruments

Catalog covers "Hydramotors," "Tork-Master" electric valve operators, "Hammel-Dahl" air operated proportioning valves and split body valves, "Foster" steam specialty and regulator valves and flow tubes for better automatic control for every commercial and industrial plant or process also covered.—General Controls Co.

97 Industrial Thermometers

Eighty-four page "American" industrial thermometer catalog 100A gives information on extensive selection of bi-metal, mercury, vapor pressure and gas actuated dial thermometers, as well as red mercury tubing and recording thermometers. Items are illustrated and have dimensional drawings, ranges, list prices. Completeness and ease of ordering to exact specifications stressed.—Manning, Maxwell & Moore, Inc.

98 Industrial Thermometers

Catalog 101, on industrial thermometers, for direct mounting, available in case sizes 7, 9 or 12 in., and submarine type 5 in. Choice of mounting angles, plus versatile "Multi-Angle" type, mountable at any angle, and special types for frost insulation, air ducts and superheaters, are described.—United States Gauge Div., American Machine & Metals, Inc.

99 Liquid Burnisher for Cleaning Contacts

Liquid burnisher in aerosol can cleans electric contacts on oil burner, gas and air conditioning controls. Equipped with insulated plastic tube to permit application in difficult areas.—The Tankit Co., Inc.

100 Liquid Level and Flow Control

Bulletin ERS-A, on special applications of McDonnell products, covers a wide variety of liquid level and flow control applications — on standby pumps, hydro-pneumatic tanks, water chillers, proportioning systems, etc. All in all, there are 21 specific case studies and each one can suggest others. — McDonnell & Miller, Inc.

101 Magnetic Motor Controls

Six page folder entitled "½ the Size of Conventional Controls" defines principle of type RA (right angle) design. Explains why magnetic motor controls of this design offer reduced size and weight without sacrificing performance or dependability. Applications prove these starters are solving the problem of packing more control into less space.—The Arrow-Hart & Hegeman Electric Co.

102 Motor Control

Condensed price catalog lists the commonly used electric motor control up to and including the size 4 rating, plus pushbuttons, limit switches and other accessories applicable to heating, piping, and air conditioning.—Allen-Bradley Co.

103 Multi-Blade Dampers

Chart tells how to make multi-blade dampers, using "Duro-Blade" kit for parallel dampers and "Opax" blade kit for opposed action dampers. Ordering information, how to make the frame and the blades, mounting the hardware, and assembling the damper are covered. — Duro-Dyne Corp.

104 Pilot Operated Valve

Class AD pilot operated self contained valve is furnished completely piped. Steam, water, air, natural gas and most fluid services. Designed to react instantaneously to infinitesimal downstream pressure variations, ½ through 12 in. size, 600 psi to ounces and intermediate pressure reductions in one step, if desired.—The C. E. Squires Co.

105 Pneumatic Control Centers

Twelve page bulletin S-103 describes the functions, applications, and operation of centralized pneumatic controls for air conditioning, heating, and ventilating systems. The advantages of using pneumatic transmission are explained and the latest developments in control center instrumentation are shown.—Johnson Service Co.

106 Pneumatic Control Systems

Bulletin M-101 explains the principles of pneumatic controls for heating, cooling, ventilating, air conditioning and industrial processes. Controls and controlled devices are shown in detail and typical applications that range from the simple thermostat-valve arrangements to complex dual duct control systems are covered.—Johnson Service Co.

107 Pressure Reducing Valve

Bulletin 582A gives sizing, capacity data on new "Leslie-Topper" valve design which employs 3:1 mechanical pilot device out of path of steam, gives flat capacity regulation characteristic and close control throughout operating ranges. Inlet pressures to 300 psi, 550 F, with reduced pressures of 2 to 35 psi.—Leslie Co.

108 Pressure Regulators

Bulletin 160 illustrates and describes "Precision" pressure regulators, types AA and AR, and IA and IR suitable for steam or air service with either 300 lb bronze or 250 lb semi-steel body with stainless steel unit pilot valve, main valve and seat, sizes ½ through 6 in. — O. C. Keckley Co.

109 Pressure and Temperature Controls

Thirty-six page bulletin describes pressure and temperature controls for air conditioning, commercial and household applications.—Ranco Inc.

110 Pressure or Temperature Recorders

Catalog 800 on pressure or temperature recorders, 12 in., describes such features as modern style case with stainless steel escutcheon plate, shelf to permit easy removal of connections, largest chart opening in industry, and others. — United States Gauge Div., American Machine & Metals, Inc.

111 Pyrometer for Low Temperatures

Bulletin 2146-C illustrates variety of thermocouples and gives complete details covering the "Alnor" type 2300-B pyrometer, a portable instrument with 6 in. scale for measuring low temperatures from minus 40 to 200 F.—Illinois Testing Laboratories, Inc.

112 Refrigerating and Air Conditioning Controls

Catalog contains installation, application, tabular and descriptive information for sizing and select-

To simplify your requests for copies of the trade literature that is reviewed here, use the convenient postage-paid cards on pages 2-31 and 2-33. Heating, Piping & Air Conditioning will advise the manufacturers.

ing thermostatic expansion valves, refrigerant distributors, solenoid valves, suction line regulators, hot gas bypass valves, float switches, high side float valves, evaporator controls and reversing valves for all refrigerants and all types of applications.—Alco Valve Co.

113 Regulators, Registers, Grilles and Diffusers

A complete line of manually controlled surface, concealed, high pressure, floor-line, remote control and air-split regulators; dampers; adjustable air conditioning registers, grilles and baseboard diffusers. — Young Regulator Co.

114 Selector Chart for Motor Controls

Quick selector chart simplifies and speeds selection and ordering of motor controls. Includes motor control ratings, sizes, features, catalog numbers, ordering instructions, listing of standard heater tables. Chart is illustrated, hole-punched at top for handy reference on wall, and has index tabs to make it easy to locate desired information.—The Arrow-Hart & Hegeman Electric Co.

115 Specialized Industrial Thermometers

Two page data sheet on specialized industrial thermometers available in both separable socket and flange connection types, the former for use on ammonia lines, compressors, feed and hot water lines, marine applications, oil lines, etc., and the latter for air preheaters, hot and cold air ducts, dry kilns, ovens, and storage rooms.—The Philadelphia Thermometer Co.

116 Standard Mercury Thermostats

New line of "Vap-Air" standard mercury thermostats featuring low cost and 30 day delivery are described in 18 page bulletin 684. Three standard merc thermostat groups are described — the well type for sensing case temperature, the duct type for gas or fluid temperature sensing, and the surface type for "area contact" temperature sensing. — Vapor Heating Corp.

117 Tank Contents Gauging Systems

Bulletin 463A describes complete line of remote and direct reading tank gauges featuring accuracy, dependability and ease of reading on dials for measuring virtually any stored liquids.—The Liquidometer Corp.

118 Tank Gauge Specification Guide

Form 632 is a specification guide especially designed in handy filing folder form to assist consulting engineers to specify their choice of tank gauges for each project. Contains sample specifications for balanced hydraulic, hydrostatic and direct reading types of systems.—The Liquidometer Corp.

119 Thermometers for Piping, Ducts

Fixed form pipe line and air duct thermometers, dial and recording thermometers, and psychrometers are described and illustrated. Included are pocket test and utility thermometers. Especially for heating, air conditioning, refrigeration, and plumbing.—Moeller Instrument Co., Inc.

120 Thermometers and Psychrometers

Forty page catalog 110 illustrating and describing industrial thermometers available in many types, explaining features and uses and indexed by applications. Information is also included on specialized gages, maximum-minimum thermometers, sling psychrometers, and hygrometers. Many specialized types for meeting various industrial needs are shown.—The Philadelphia Thermometer Co.

Drying & Process Equipment

121 Convertors

New 12 page bulletin 50-1 describes the "Paracoil" series K line of steam-to-water convertors and gives capacity table from 0 to 15 psig steam. Units are for application in commercial, domestic and industrial systems employing forced circulation of hot liquids at low and high temperature levels.—Davis Engineering Div., Tube Reducing Corp.

122 Industrial Direct Fired Heaters

New application manual for industrial direct fired heaters covers survey procedures, transmission factors, conduction, infiltration, exhaust calculations, estimating factors, open door loading heating, fuel pipe designing, process heating, calculations, make-up air systems, high temperature psychrometric charts, conversion tables, reference data.—Lennox Industries Inc.

123 Low Temperature Refrigeration

Bulletins 95 and 105 describing Niagara "No-Frost" method of refrigeration for producing and holding temperatures of 0 F and below, giving completely automatic operation and continuous operation without shutdown for defrosting. Applications are industrial uses such as subzero testing, production of dry atmospheres and food freezing and storage. — Niagara Blower Co.

124 Regulators, Valves, Expansion Joints

Robertshaw temperature regulators for heating, ventilating and air conditioning described in catalog B. Self-operated vapor pressure, hot chamber types. Pneumatic and electrically actuated types to provide controller, positioner, valve in one unit. Automatic radiator valves for room control. Packless expansion joints for water and steam, working pressures to 150 psig, are also described.—Fulton Sylphon Div., Robertshaw-Fulton Controls Co.

Dust & Fume Collection

125 Carbon Monoxide Elimination

Bulletin 650 covers "AirXpeler" exhaust system for removal of auto, truck and diesel exhaust fumes. It is available in "Swing-O-Way," underfloor and overhead disappearing models.—Ammerman Co., Inc.

126 Draft Inducers

Quickdraft power draft inducers increase combustion efficiency and economy of any heating plant or incinerator; eliminate pulsating, sooting, smoking and need for tall stacks. Bulletin 104 illustrates unique design and operating principle, typical installations and provides specifications for five sizes. Units are available in diameters from 4½ to 30 in. — Quickdraft Corp.

127 Electronic Precipitators

Special four page bulletin describes new compact "Misti-Maze" electronic precipitator designed to efficiently treat localized air pollution problems. Air is cleaned without outside venting, avoiding heating and cooling loss.—Air-Maze Corp.

128 Fabric Dust Collector

Bulletin 279C describes "AMERjet" reverse jet fabric dust collector which is designed for applications where extremely fine dust particles are involved and the material must be collected in a dry state for reclaiming. Bulletin includes application and size data, selection nomograph, dimension chart and exploded drawing of cleaning mechanism.—American Air Filter Co., Inc.

Electric Heat

129 Electric Hot Water Heating Boiler

New Precision electric boiler for all types of hot water or low pressure steam heating systems, completely wired, ASME constructed, 20 year guarantee, and equipped with sequence controls and outdoor thermostat if desired, is available in 20,000 to 2,500,000 Btu output capacities.—Precision Parts Corp.

130 Hermetic Heat Pump

Product release announces new Lennox hermetic heat pump in two sizes with heating capacities of 22,200 and 38,000 Btuh and cooling ratings of 23,000 and 35,000 Btuh respectively at ARI standards. Special four mercury bulb thermostat employs fourth tube, keeps reversing valve in heating or cooling position.—Lennox Industries Inc.

Fans, Blowers, Ventilators

131 Air Conditioning and Furnace Blowers

Colorful, illustrated 12 page booklet describes standard line of blower assemblies, blower wheels, and parts. Each blower and wheel is detailed with cross-reference to Lau engineering catalog.—The Lau Blower Co.

132 Air Velocity Meter

Bulletin B-6 presents the Dwyer air velocity meter, an instrument for testing fan and blower discharge and inlet pressures, pressure drop across filters, balancing air conditioning systems, etc. Instrument comes in portable kit form which includes

the dual purpose manometer, 18 in. stainless steel pitot tube, accessories and metal carrying case.—F. W. Dwyer Mfg. Co.

133 Axial Airfoil Fans

Twenty page bulletin AA-102 gives all specifications, performance and dimensional data on axial airfoil duct, extended shaft, orifice ring, pedestal, cradle and portable type fans. Wheels feature new aerodynamic blade and hub design for higher efficiency.—Chicago Blower Corp.

134 Belt Drive Centrifugal Sets

Twenty page bulletin 3401 is a detailed selection guide for new Ilg line of belt driven "Util-A-Sets" with choice of backward blade or forward curved wheels. Pertinent engineering data includes capacity tables, dimensional drawings, accessories, sample fan specifications, and other useful information on ventilation installations.—Ilg Electric Ventilating Co.

135 Belted Ventilating Sets

Bulletin 110 covers performance data and gives details on non-overloading style of belted ventilating sets.—Barry Blower Co.

136 Blower Motors

Exclusive sealed capsule single and polyphase motors are described in bulletin. Single phase, 1/3 to 5 hp; polyphase, 1/3 to 800 hp.—A. O. Smith Corp.

137 Blowers

Sixty page catalog 260 describes non-overloading class 1 and 2 "Power-Fixed" blowers. Static efficiency high in area of normal selection. Special consideration given design for high efficiency and quiet operation on medium and high pressure air conditioning systems.—Peerless Electric Div., H. K. Porter Co., Inc.

138 Central Air Conditioning

Engineering catalog with illustrative and descriptive information and complete selection data on central plant conditioners, multizone conditioners, sprayed coil units, heating-ventilating units, cooling and heating coils. This catalog is notebook type and is index tabbed for easy and quick use. — Thermal Engineering Corp.

139 Centrifugal Fans

Bulletin A-1103 covers new line of "Airfoil" bladed centrifugal fans for general ventilation, air conditioning systems and industrial process applications. Fans feature high efficiency, quiet operation, non-overloading power characteristics and AMCA certified ratings. Available in 15 standard sizes, single and double inlet designs, and standard AMCA arrangements.—American-Standard Industrial Div.

140 Centrifugal Power Roof Exhausters

Bulletin 60-CK describes new series of "Keyline" spun aluminum, belt-drive centrifugal exhausters for heavy duty service. Low contour with motor and drive assembly mounted to side out of air stream. Automatic belt tightening device. Non-overloading centrifugal wheel. Five sizes, 141 models, with capacity range 725 to 22,400 cfm. — Jenn-Air Products Co., Inc.

141 Centrifugal Power Roof Ventilators

Eight page bulletin 2701 features centrifugal power roof ventilators for exhaust applications at static pressures up to 2 in. Describes in detail the Ilg backward curved "Airfoil" design blades, direct connected drive, motor and accessories. Included are capacity ratings, noise level classifications, motor selection specifications and installation data. — Ilg Electric Ventilating Co.

142 Centrifugal Roof Exhaust Fans

Roof exhaust fans with low silhouette to conform to modern architectural trends. Fan heights substantially less than conventional designs. Welded construction, quiet operation, minimum maintenance, are features of this roof exhaust fan line. — Davidson Fan Co.

143 Centrifugal Roof Ventilators

Catalog DS-361c covers Trane centrifugal roof ventilator, a compact, complete-in-one-package unit ideal for air moving applications for new or existing buildings. It is particularly well suited for schools, hospitals, churches, office buildings, theaters, auditoriums, TV and radio stations and similar buildings where quiet operation is essential.—The Trane Co.

144 Curb for Roof Ventilators

Prefabricated "Insta-Curb" for roof ventilators has all welded, painted steel construction, speeds installation, assures correct mounting. Fiber glass insulation. Base and corner cants protect roofing, eliminate leaks and maintenance problems. Wood top curb for easy ventilator mounting. Comes completely assembled and ready for installation. —Swartwout Fabricators, Inc.

145 Direct Connected Vaneaxial Fans

Bulletin 475 covers new Aerovent direct connected vaneaxial fans, which are equipped with removable vane sections to facilitate installation and simplify routine cleaning and maintenance. Furnished in sizes 18 to 48 in. for capacities to 67,300 cfm, these high efficiency units offer performance against resistances to 6 in. SP.—Aerovent Fan Co., Inc.

146 Direct Fired Heaters

Four page bulletin 810R on direct fired heaters — "Therma-Flo" suspended series TF for oil or

gas firing, hi-boy and counter-flo U series for oil or gas firing, and heavy duty "Therma-Flo" duct heaters in oil fired and gas fired series. Features of each are described, and ratings and dimensions are tabulated. — National Heater Co.

147 Draft Inducers

Quickdraft power draft inducers increase combustion efficiency, economy of any heating plant or incinerator; eliminate pulsating, sooting, smoking, need for tall stacks. Bulletin 104 illustrates unique design and operating principle, typical installations and provides specifications for five popular sizes. Units are available in diameters from 4½ to 30 in. — Quickdraft Corp.

148 Fan Sets

A new line of "Ready Units" — V-belt driven, ready-to-run fan sets — is covered in 36 page catalog 517. These units are for volumes to 25,000 cfm, for static pressures through 2½ in., and for clean air up to 300 F. Dimensions and capacity tables included. — Clarage Fan Co.

149 Fans

Bulletin F-104 details single and double inlet type BL limit load fans which are widely used to supply and exhaust air in heating, ventilating and air conditioning applications. Bulletin points up special features and economies of design, construction and performance and gives complete range of sizes and capacities.—Buffalo Forge Co., Air Handling Div.

150 Fan and Blower Motors

Booklet B-7066 describes the complete line of Westinghouse motors available for fan and blower applications.—Westinghouse Electric Corp.

151 Fans for Quiet Operation

Bulletin 592 describes the "AcoustaFan" which features a Flow-Nozzle air foil wheel designed specifically for quiet operation in capacities of from 6000 to 220,000 cfm, static pressures 3 in. wg through 11 in. wg. Quiet zone selection tables make an automatic selection of the quietest possible fan.—The New York Blower Co.

152 General Purpose Fans

Bulletin 602 covers complete line of direct and belt driven packaged fans capable of delivering from 160 to 19,000 cfm at static pressures up to 2 in. Easy to install and maintain, these units are available with weather cover for outdoor installation.—The New York Blower Co.

153 Gravity and Power Ventilators

Complete 54 page catalog and engineering data 60-1 on Breidert "Air-X-Hauster" and "Powair-X-Hauster" gravity and power ventilators. Includes new square, rectangular, low silhouette models with translucent top available, making combination ventilator and skylight; specifications; capacity tables; test data; installation hints; wind velocity tables for U.S.; selection charts; and other data. — The G. C. Breidert Co.

154 Mixed Flow Fan

New mixed flow fan, especially designed for ventilating, air conditioning, and industrial installations, has recently been introduced. Featuring spin free air delivery with constantly rising pressure and non-overloading horsepower curves, space saving compactness over ordinary fans. The fan will be furnished in full range of sizes.—Air Motion Research, Div. of Missile Dynamics Corp.

155 Gravity Roof Ventilators

Engineering data for quick, easy selection of square and rectangular size gravity roof ventilators is outlined in bulletin AEG-60. Charts from 500 to 40,000 cfm and static pressure losses for discharge or relief units are diagrammed. Intakes from 1500 to 35,000 cfm are included along with drawings and dimensions. — Penn Ventilator Co., Inc.

156 Heavy Duty Coils

American-Standard has completed heavy duty coil line, first marketed in 1946, with introduction of steam distributing and hot water coils. The line, described in bulletin B-1518, provides coils for any air heating application where rugged construction, corrosion resistance, ease of access for cleaning, inspection and maintenance are essential. — American-Standard Industrial Div.

157 Heavy-Duty Fans

Type AF heavy-duty "Dynafoil" fans, featuring a perfected airfoil blade design, are described in catalog 859. This equipment is especially suited to conduit type air conditioning, mechanical draft, industrial processes, tunnel ventilation, and similar applications. — Clarage Fan Co.

WHEN USING REPLY CARDS

When you use the reply cards on pages 2-31 and 2-33 to request the literature you want, please circle clearly the corresponding item number on the card for each catalog or bulletin to be sent to you.

The item number is the big number at the left of the title for each item. For example, in the item immediately above, the number to circle on the reply card would be 157.

In filling out the card, it will be appreciated if you will print or type your name, address, etc. clearly to simplify the task of sending you the material you want.

Over 700 descriptions of catalogs, bulletins and other data available, without obligation, on request are described in these pages. The items are arranged by general classifications and each is titled to make it easy to find the ones of particular interest to you

158 Industrial Cooling Fans

Four page folder describes the complete line of "Aeromaster" industrial cooling fans.—Koppers Co., Inc., Metal Products Div.

159 Industrial Fans

Condensed industrial fan catalog gives capacities, sizes and wheels for applications covering air conditioning, heating, fume or high temperature exhausting, dust or material handling, induced or forced draft, roof ventilation, high velocity ventilation, and general ventilation.—Chicago Blower Corp.

160 Low Sihouette Roof Ventilators

The Carnes Corp. announces catalog 659, which contains descriptions and engineering data on the new low silhouette power roof ventilators. All models LS with wheel diameters of 12 in. and over carry the seal of approval from the Air Moving and Conditioning Association. (The association does not rate sizes below 12 in.)—Carnes Corp.

161 Mechanical Draft Fan

Bulletin RT-100 describes new radial tip mechanical draft fan for rugged induced draft service in central power stations, industrial plants, paper mills and sintering plants.—Chicago Blower Corp.

162 Motor Application Guide

Sixteen page application guide bulletin 270B outlines electric motors ranging in size from 1/20 to 400 hp. Includes polyphase, single phase and direct current motors. Factors to consider in motor selection are discussed along with numerous motor selection charts.—Century Electric Co.

163 Motor Control

Condensed price catalog lists the commonly used electric motor control up to and including the size 4 rating, plus pushbuttons, limit switches and other accessories applicable to heating, piping, and air conditioning.—Allen-Bradley Co.

164 Motors for Fans

Bulletin MU-250 describes Wagner "Air-Over" motors which mount directly in the air stream of the driven propeller or axial flow fan in cooling towers, exhaust systems, air cooled heat exchangers and condensers. By eliminating a self-contained fan, motors cost less than standard TEFC motors yet give same protection.—Wagner Electric Corp.

165 Non-Overloading Centrifugal Fans

Bulletin 400B covers performance data on type BBC non-overloading centrifugal fans of the SWSI type, in both classes 1 and 2.—Barry Blower Co.

166 Power Exhausters

Twelve page bulletin 58-B with information on wide range of spun aluminum models in Jenn-Air "Quiet-tested" proven exhauster line: Belt drive and direct drive roof exhausters with centrifugal or axial impellers; direct drive wall exhausters with centrifugal wheels; relief vents. Performance and dimensional data, electrical characteristics, curb cap mounting diagrams. — Jenn-Air Products Co., Inc.

167 Power Ventilators

Vertical discharge high velocity "Aeromatic" exhauster power ventilator for rapid exhaust is described in bulletin. — Octagon Ventilator Co.

168 Propeller Fans

Twenty page catalog DB1-100 describes in detail complete line of direct drive, self-cooled motor propeller fans; including high and low speed units, explosionproof and tubeaxial types, sizes 6 to 48 in., capacities 250 to 27,100 cfm. Dimensions, accessories and table of recommended air changes included.—Ilg Electric Ventilating Co.

169 Propeller Fans

Twelve page bulletin 280 describes belt and direct drive units for general ventilation and equipment cooling, most suitable for vertical or horizontal mounting. Supply or exhaust models are made in various types from 10 to 48 in. blade diameter.—Peerless Electric Div., H. K. Porter Co., Inc.

170 Roof Ventilators

Bulletin 609 covers new Aerovent "sil-low-et" roof ventilators designed to provide the lateral look for commercial and public buildings, and industrial plant and office structures. Furnished in sizes 12 to 48 in. in belted and direct connected models for capacities to 35,900 cfm at external resistances of $\frac{1}{8}$ to $\frac{3}{8}$ in. SP.—Aerovent Fan Co., Inc.

171 Roof Ventilators

Modern spun aluminum "Vent-X-It" roof ventilators are described in bulletin. — Octagon Ventilator Co.

172 Roof Ventilators

New catalog describes 59 new belt and direct drive fiber glass "Fiber-Aire" roof ventilators with 180 to 13,150 cfm capacities. New type air flow guides eliminate internal air shocks and in-

crease efficiency. Available with stainless steel wheels. Bonded fiber glass housings with molded-in skyblue color are virtually indestructible and silent.—Swartwout Fabricators, Inc.

173 Roof Ventilators

Engineering data and certified ratings are given for low silhouette roof ventilators for virtually all applications. Rotary, stationary, directional, continuous ridge, unit, axial hooded and axial vertical exhaust types. Also, multi-purpose units that offer gravity, power, supply or exhaust as well as combination ventilator-skylight units of various designs.—Western Engineering & Mfg. Co.

174 Roof and Wall Exhausters

Bulletin 100-60 covers line of spun power and gravity roof and side wall exhausters under the trademark "AirXpeler," and "AirMpeler" line of belt-driven units, "HiBoy" and "LoBoy" units of backward curve centrifugal design, along with fabricated gravity ventilators. — Ammerman Co., Inc.

175 Square Panel Propeller Fans

Bulletin DB1-106 describes, illustrates and gives complete selection data for new Ilg line of square panel propeller fans in capacities up to 37,750 cfm. Available with either standard type Q wheel or airfoil design 5 or 9 blade wheels. Direct drive and self-cooled motor features detailed.—Ilg Electric Ventilating Co.

176 Steel Plate Exhausters

Bulletin 600 gives performance data on steel plate exhausters of the radial blade type for all industrial applications.—Barry Blower Co.

177 Translucent Gravity Ventilators

Complete 54 page catalog and engineering data 60-1 on Breidert "Air-X-Hauster" and "Powair-X-Hauster" gravity and power ventilators. Includes new square, rectangular, low silhouette models with translucent top available, making combination ventilator and skylight; specifications; capacity tables; test data; installation hints; wind velocity tables for U.S.; selection charts; and other data.—The G. C. Breidert Co.

178 Translucent Gravity Ventilators

Bulletin LTX-59, a supplement sheet to bulletin LX-59C, provides detailed information for low silhouette gravity exhausters with translucent fiber glass dampers and weather caps. Light values of illumination are presented in table form for easy selection of standard size units. Drawings, unit dimensions and gauges and weights are included. —Penn Ventilator Co., Inc.

179 Utility Blowers

Thirty-six page catalog 200 describes Peerless Electric non-overloading belt drive utility class 1 blowers. With self-limiting horsepower characteristics they have the advantage of mounting one complete unit which has been tested for motor characteristics, as well as for speed and drive alignment.—Peerless Electric Div., H. K. Porter Co., Inc.

180 Ventilator and Skylight

"Lite-'N-Aire" heat valve combination ventilator and skylight is described in four page illustrated folder. High efficiency, low cost ventilator provides quantities of pleasant, natural light whether damper is open or closed. One unit, one roof opening, one installation cost. For industrial, commercial and institutional use.—Swartwout Fabricators, Inc.

181 Ventilators

Gravity, power and continuous roof ventilators are described in catalog. — Octagon Ventilator Co.

Fuel Burning, Stacks & Vents, Draft

182 Atmospheric Gas Burner

Bulletin B8 describes the Webster "Kinetic" gas burner and gives complete information on how to select burner size, automatic operating controls, combustion safeguard and control valves. Charts and diagrams illustrate information.—Webster Engineering, Div. of Midland-Ross Corp.

183 Atmospheric Gas Burners

Catalog A-10 covers "Blue Line" atmospheric upshot gas burner with distinctive slotted head. On-off, modulating or step firing. Inputs up to 8 million Btu per hr on natural or LP gas.—Gordon & Piatt, Inc.

184 Automatic Coal Burners

Six page descriptive brochure on "Combustioneer" underfeed hopper and universal binfeed type stokers for commercial and industrial application. Coal conveying equipment data included.—Bituminous Coal Equipment, Inc.

• *Use the reply cards on pages 2-31 and 2-33.*

185 Automatic Firing Equipment

Catalog 6260 describes complete line of Iron Fireman commercial and industrial burners. Included is an index and selection chart which enables users to select appropriate equipment based on type of fuel and kind of draft. Single or dual fuel combustion equipment available.—Iron Fireman Mfg. Co.

186 Barometric Draft Control

Twenty page handbook and installation guide for barometric draft control explains why draft must be controlled, where to install a draft control, selecting the right size, how to install, and use of instruments in setting a control. Detailed information on several controls included in handbook. —Field Control Div., Conco Engineering Works, Inc.

187 Barometric Draft Controls

Barometric draft control installs on flue pipe near smoke outlet, regulates combustion air by controlling chimney draft. Self-contained; no electric, air or hydraulic connections being required. Models and sizes for all flue pipes—oil, gas, or solid fuel. No operating cost, easy installation and adjustment. —Walker Mfg. & Sales Corp.

188 Burner Equipment

Sixteen page booklet illustrates and describes Ray Burner equipment for firing oil, gas or combination oil/gas; manual, semiautomatic, and fully automatic models; rotary, pressure atomizing, inshot gas; packaged forced draft boiler-burner units. A burner for every domestic, commercial or industrial need.—Ray Burner Co.

189 Combustion Development Laboratory

Four page bulletin 759 describes National Airoil combustion development laboratory, which serves as a proving ground for burner designs. Equipment includes test heater-furnaces, mixing cell for proportioning air-gas, propane storage, boilers, and facilities for testing smaller oil and gas burners.—National Airoil Burner Co., Inc.

190 Control of Draft

Specifications and information for architects, engineers and contractors covering industrial heating and processing equipment applications are given in 12 page bulletin. — Field Control Div., Conco Engineering Works, Inc.

191 Directional Chimney Caps

Directional chimney caps that eliminate downdraft caused by trees, buildings, or other obstructions are described in bulletin. Venturi throat, sealed pivots, and counterbalanced construction assure sensitive, dependable performance. Sizes range from 4 to 12 in. base diameter.—Walker Mfg. & Sales Corp.

192 Draft Inducers

Quickdraft power draft inducers increase combustion efficiency and economy of any heating plant or incinerator; eliminate pulsating, sooting, smoking and need for tall stacks. Bulletin 104 illustrates unique design and operating principle, typical installations and provides specifications for five popular sizes. Units available in diameters from 4½ to 30 in. — Quickdraft Corp.

193 Draft Inducers

Bulletin I-59 describes draft inducers for heating boilers and power plants, ranging from small domestic and commercial heating units to those for boilers up to 120,000 lb per hr. Packaged design units are factory assembled, with air-cooled fan bearings and interchangeable inlet panels. Motor, turbine, or dual drive. — L. J. Wing Mfg. Co., Div. of Aero Supply Mfg. Co. Inc.

194 Dual Stage Oil Burners

Four page bulletin 25A describes and illustrates dual stage oil burners for mechanical plus steam atomization to provide more finely divided oil spray, wider capacity range, shorter flame, and greater heat release in same firing length. Specifications are tabulated.—National Airoil Burner Co., Inc.

195 Factory-Built All-Fuel Chimney

Eight page, two color, illustrated bulletin RS-1 gives complete application, installation, and specification information on the durable, attractive, tile-lined Flintkote/Van-Packer factory-built residential chimney. Included are photographs, drawings, and charts together with complete product application data for new construction and for remodeling existing construction. — Van-Packer Div. of The Flintkote Co.

196 Flue Pipe Draft Inducers

Flue pipe draft inducers augment natural draft, make ample draft for chimneys that fail to provide for good combustion. Sizes available for flue pipes 4 to 24 in., oil, gas, or solid fuel. Simple installation, low initial and operating cost. Models for 110 volt, 60 cycle and 220 volts, 50/60 cycles. —Walker Mfg. & Sales Corp.

197 Forced Draft Gas Burner

Bulletin B14 gives complete information on seven sizes of Webster "Dynetic" packaged, forced draft gas burners from 800,000 to 3,200,000 Btu/hr. Also covered are special features available to meet local design or code requirements.—Webster Engineering, Div. of Midland-Ross Corp.

198 Gas Conversion Burners

"Lo-Blast" power inshot gas conversion burners for efficient gas firing all types of larger boilers and furnaces, in sizes from 700,000 to 20,000,000

Btu input. Available for all gases; fuel saving over atmospheric burners 10 percent or more. Motor and blower provide all combustion air, independent of stack draft.—Mid-Continent Metal Products Co.

199 Gas Conversion Burners

"Economite" power type gas conversion burners, used for converting all types of smaller boilers and furnaces to gas firing, range in size up to 700,000 Btu input. Ideal for downdraft units. Positive air supply provides 10 percent fuel saving over atmospheric burners. Inshot gun type design simplifies oil replacement. Quiet operation. —Mid-Continent Metal Products Co.

200 Gas, Oil and Gas/Oil Burners

Catalogs E-51 and E-61 cover "Turboring" burner for forced, induced or natural draft applications. Inputs to 9 million Btu per hr on gas, light oil or combination gas and oil fuels.—Gordon & Piatt, Inc.

201 Horizontal Flame Atmosphric Burners

Catalog H-1A covers type H inshot atmospheric burner for horizontal flame applications. Inputs to 15 million Btu per hr.—Gordon & Piatt, Inc.

202 Incinerator Burner

Compact assembled "Incinomite" power type incinerator burner with capacities of 100,000 to 750,000 Btu can be readily applied to old or new incinerators. Provides positive combustion air to long luminous flame to dry and ignite refuse and eliminate smoke and fumes. Various controls systems available.—Mid-Continent Metal Products Co.

203 Low Pressure Air Atomizing Burners

Bulletin 1 describes low pressure air atomizing burners with capacities of 5 to 150 gph. Burn Nos. 1, 2, 5 and 6 oils cleanly and automatically. All models have low fire start and build up to required size for safe, smooth operation.—Industrial Combustion, Inc.

204 Metal Gas Vent

Sixteen page, two color, illustrated bulletin MGS-34 gives complete application, installation, and specification information on the versatile, strong, and efficient Flintkote/Van-Packer metal gas vent. Photographs, drawings and diagrams aid in product selection and specification. Ordering information is included together with a handy product selection table. — Van-Packer Div. of The Flintkote Co.

205 Oil, Gas, Dual Fuel Burners

Form 5808 describes light oil, gas, and dual fuel oil-gas burner designed for operation against firebox pressure. Special burner head produces high combustion efficiency, prevents flame pulsation and fires No. 2 fuel oil and/or natural or LP gas. Models available for firing pressurized or natural draft boilers.—Iron Fireman Mfg. Co.

206 Package Boilers

The Ames general catalog AA lists their complete line of package boilers for either steam or hot water production. They are available for either light or heavy oil firing, gas firing, or combinations of the two. Capacities include a range to meet most every commercial and industrial hot water or steam requirement. — Ames Iron Works, Inc.

207 Packaged Boilers

Bulletin AD 137 gives complete dimensions and ratings of full line of packaged boilers. 15-600 hp, oil, gas and combination fired. Eight page catalog AD 178 describes CB packaged boilers for heating and processing — four pass, forced draft construction, low furnace and 5 sq ft of heating surface per boiler hp.—Cleaver-Brooks Co.

208 Pneumatic Spreader Stokers

Form 2530 gives detailed information on P.S. series 401 stokers which automatically meter, dry, preheat, convey, and efficiently fire all sizes and grades of coal, from lignite to the best bituminous. System continually adjusts firing rate to steam demand. Cutaway views, photographs and diagrams included.—Iron Fireman Mfg. Co.

209 Power Gas Burners

Bulletin 2 describes heavy duty gas burners and combination gas/light oil and gas/heavy oil burners with capacities up to 21,000,000 Btu. All models built to Factory Mutual requirements or equal.—Industrial Combustion, Inc.

210 Pressure Atomizing Oil Burner

Four page bulletin 100 describes type C-45 pressure atomizing oil burner for heavy commercial fuel oils (Nos. 4 and 5.) Features are illustrated and specifications tabulated.—National Airoil Burner Co., Inc.

211 School Heating Data

Interim report "Gas Vs. Electric Heating at Shingle Creek School" on a study conducted by the Minneapolis school system, offers revealing data on two identical schools for guidance of architects, engineers and school officials. Offers ways to reduce costs and make operations more efficient.—Industrial and Commercial Gas Section, American Gas Association.

212 Self-Clearing Coal Conveyor

Four page bulletin illustrates and describes new power-reversing coal conveyor; includes draw-

ings showing typical installations with single or dual discharge, horizontal cross feed tandem, and vertical operation.—Will-Burt Co.

213 Smokestacks

Eight page bulletin IS-49 on factory-built, low-cost, insulated refractory smokestack offered by Flintkote's Van-Packer Div. for commercial and industrial application to incinerators, boilers, furnaces. Product information, application data, photographs, drawings, engineering and mechanical data. Typical specifications included for UL-listed model HT smokestack, and for models AP and BF. — Van-Packer Div. of The Flintkote Co.

214 Stoker Heating

Twelve page brochure on logic of stoker heating illustrates and discusses stoker-feed coal heating in schools, public and institutional buildings. Contains comparative cost data and reports heating costs with competitive fuels in actual, large metropolitan school district.—Will-Burt Co.

215 Stokers

Bulletin describes and illustrates Detroit underfeed and overthrow spreader stokers for all industrial, institutional and heating plant installations. Wide range of sizes and capacities, the result of 60 years of leadership in the design, manufacture and installation of stokers. — Detroit Stoker Co., Div. of United Industrial Corp.

Over 700 descriptions of catalogs, bulletins and other data available, without obligation, on request are described in these pages. The items are arranged by general classifications and each is titled to make it easy to find the ones of particular interest to you.

Gaskets & Packing

216 Adhesive Products

Four page catalog contains basic information on a variety of adhesives for bonding high and low density insulation materials to sheet metal ducts; both solvent types and water dispersed adhesive products included. Data on a duct seam sealer for use on high pressure systems is covered in catalog. —Minnesota Mining & Mfg. Co., Adhesives, Coatings & Sealers Div.

217 Asbestos Sheet and Gaskets

Eight page catalog describes single formula material that can be used wherever asbestos sheet gaskets are applicable. Lists over 120 different chemicals with which it can be used with proved safety, and includes a table of sheet sizes carried in stock. Gives prices and dimensions of cut gaskets in various types and sizes.—Durabla Mfg. Co.

218 Packings, Gaskets and Rings

Catalog M-P covers pump piston packings of flax, jute, asbestos, plastic, and rubber and duck compounds for all service conditions. Also covered are graphited asbestos, square plaited flax and sheet packings from various materials, gaskets and rings.—Goodall Rubber Co.

219 Sheet Packing

Brochure describes Goodyear line of sheet packing, chute lining, and corrugated matting.—The Goodyear Tire and Rubber Co.

Hot Water & Steam Equipment

220 Automatic Packaged Boilers

Four page bulletin BE 400 gives tabulated data on 35 models of "Continental" automatic boilers, ranging from 15 through 600 hp sizes, and includes output conversions, dimensions and weights, and fuel consumption.—Boiler Engineering & Supply Co., Inc.

221 Boiler-Burner Plant

Bulletin 4 describes scotch type, two pass boiler-burner manufactured to ASME standards for low pressure, 125 lb or 150 lb pressure. Capacity range 10 to 450 hp. Fired with heavy oil, light oil, gas or combination burners.—Industrial Combustion, Inc.

• *When sending your requests, please be sure to type or print your name and address clearly.*

222 Boiler-Burner Units

Bulletin on the Spencer C series of boiler-burner units for all types of fuel operation and available as a gas or oil fired low-set package unit, with insulated jacket and a large range of tank and instantaneous type coils. Capacities from 351,000 to 1,350,000 Btu net SBI table 2 ratings.—Spencer Heater Div., Avco Corp.

223 Boilers

Packaged steam or hot water "Reliance" boilers, which are ASME coded and in accordance with SBI ratings, range in capacities from 15 to 500 hp. Designed for burning gas, oil, or combination fuels and available in high and low pressure. Forced draft design eliminates need for stacks. Three pass design and 5 sq ft per boiler hp insure efficiency, trouble-free operation.—Arkos Mfg. Co.

224 Boilers

Roberts-Gordon catalog gives details on extensive line of oil and gas fired cast iron boilers, oil and gas fired furnaces, central air conditioning units, gas fired conversion and industrial gas burners and gas fired unit heaters. Sizes and designs for domestic, institutional, commercial and industrial applications. — Roberts-Gordon Appliance Corp.

225 Boilers, Water Heaters, Storage Tanks

Gas fired copper tube boilers and volume water heaters, swimming pool heaters, and hot water storage tanks and coils are described in bulletins 78, 105, 104.—Raypak Co., Inc.

226 Cast Iron Gas Boiler

Eight page bulletin C-297 describes type J gas boiler and gives information on electronic control, dual fuel features, ratings and dimensions. Net ratings from 360,100 to 3,354,000 Btu per hr (14.3 to 129.1 hp).—Weil-McLain Co.

227 Convertors

New 12 page bulletin 50-1 describes the "Paracoil" series K line of steam-to-water convertors and gives capacity table from 0 to 15 psig steam. Units are for application in commercial, domestic and industrial systems employing forced circulation of hot liquids at low and high temperature levels.—Davis Engineering Div., Tube Reducing Corp.

228 Electric Hot Water Heating Boiler

New Precision electric boiler for all types of hot water or low pressure steam heating systems, completely wired, ASME constructed, 20 year guarantee, and equipped with sequence controls and outdoor thermostat if desired, is available in 20,000 to 2,500,000 Btu output.—Precision Parts Corp.

229 Forced Draft Package Boiler Units

Bulletin 149 D covers new line of "Kewanee" forced draft Scotch package units in sizes from 82 to 691 bhp, high and low pressures for varied heating and power application requirements, UL listed for gas, oil or combination gas-oil. Engineering and sizing data included.—American-Standard Industrial Div.

230 Gas Boiler

Bulletin describes completely packaged or partially assembled gas boilers for forced hot water, gravity or steam with net ratings from 38,300 to 172,500 Btu per hr. Information on dual fuel, tankless heater capacities, ratings, and dimensions are given.—Weil-McLain Co.

231 Gas Fired Storage Water Heaters

Twenty page booklet describes new type of storage water heater for commercial, industrial and institutional installation. Details are given on "P-K" "Scalefree" gas fired storage heater, features, storage and recovery capacity, and why the "Scalefree 230" remains so.—The Patterson-Kelley Co., Inc.

232 Heat Exchange Equipment

Catalog 6 describes storage water heaters, instantaneous heaters, fuel oil heaters, dishwasher booster heaters, condensate coolers, convertors and "Pre-Krete" lining.—The Patterson-Kelley Co., Inc.

233 Heating Specialties

Catalog 76-H shows complete line of valves, traps and vents, and includes capacity charts and roughing-in dimensions. — Marsh Instrument Co., Div. of Colorado Oil and Gas Corp.

234 High Pressure Steam Fan Heater

Bulletin 109 describes and illustrates unit heater which completely utilizes both the sensible and latent heat of high pressure steam for processes or industrial heating systems, thereby saving the cost of large mains, pressure reducing stations and hot wells. Condensate is sub-cooled and returned to boiler vapor-free at atmospheric pressure or vacuum.—Niagara Blower Co.

235 High Temperature Water Boilers

Brochure contains complete details on "Flo-Kontrold" high temperature water boilers available in both vertical and horizontal designs, from 4 to 100 million Btu per hr. Fuel burning equipment is optional—oil, gas, coal or combination of fuels.—Boiler Engineering & Supply Co., Inc.

236 High Temperature Water Generators

Advantages of "International-LaMont" high temperature water generators are described in new 16 page bulletin 1600. Engineering data section gives factual comparison between HTW and high pressure steam systems along with pertinent cost considerations. Typical pressurization and pumping arrangements are discussed and illustrated. — The International Boiler Works Co.

237 Hot Water Boilers

Hot water boilers standardly furnished ASME 125 psi, 250 deg, and designed for all types of closed circuit hot water systems are also available for high temperature water application. Gas, oil or gas oil fired, 126,000 to 5,000,000 Btu, steel water tube design.—Sid E. Parker Boiler Mfg. Co., Inc.

238 Hot Water Heating Boiler

"Multi-Temp" hot water heating boiler, which represents a new concept in the use of gas for commercial and industrial installations, is described in bulletin. Sixteen sizes with a capacity range from 300,000 to 3,600,000 Btu per hr input. Provides "true" input modulation by employing a multiple of Hydrotherm units each equipped with its own set of controls. — Hydrotherm, Inc.

239 Hot Water Heating Boilers

Bulletin describes Hydrotherm hot water heating boiler of all cast iron construction, 11 sizes with a capacity range from 50,000 to 300,000 Btu per hr. A quality product, especially engineered for gas fired systems. Requires minimum installation space;is efficient in operation; and is competitively priced. — Hydrotherm, Inc.

240 Hot Water Packaged Boilers

Bulletin describes gas fired, cast iron packaged boiler, equipped with factory piped and wired accessories, plus positive built in air elimination system. Assembly includes thermostat, dual aquastat, pressure reducing (fill) valve, diaphragm expansion tank, circulator, boiler dip tube, automatic float type air vent, self-energizing control circuit, relief valve, vertical draft hood.—Hydrotherm, Inc.

241 Hydronic Heating

Hydronic heating ratings, data, and dimensions catalog provides pertinent information on design and construction details of hydronic heating equipment for residential and commercial application. Equipment includes gas fired and oil fired cast iron boilers and conversion burners; nonferrous and cast iron baseboard heating panels and wall mounted convectors; cast iron radiators.—American Radiator and Standard Sanitary Corp., Plumbing and Heating Div.

242 Indirect Hot Water Boilers

All steel water tube boiler with built in copper heat exchanger with capacities of from 2640 to 1,152,000 Btu per hr is specifically designed to furnish volume domestic hot water, 254 to 1106 gal per hr, 100 deg rise, and for heating swimming pools.—Sid E. Parker Boiler Mfg. Co., Inc.

243 Low Water Line Boiler

Spencer LW divided low water line boiler is a patented unit incorporating special design features to overcome problems in headroom, existing building entry and excavation with a capacity range of from 597,600 to 9,448,800 Btu net SBI ratings. Extra high firebox with square proportions provides ample room for all types of fuel burning equipment; up to 100 lb water operating pressure.—Spencer Heater Div., Avco Corp.

244 Oil Burning Boiler

Specially designed "Pace-King" cast iron vertical fin oil boiler, in steam 1205 to 4500 sq ft IBR rated, and water 1925 to 7200 sq ft, is described in bulletin. Available with specially built-in tankless, all copper water heater from 6 to 15 gpm.—Burnham Corp., Heating & Cooling Div.

245 Package Boilers

The Ames general catalog AA lists their complete line of package boilers for either steam or hot water production. They are available for either light or heavy oil firing, gas firing, or combinations of the two. Capacities include a range to meet most every commercial and industrial hot water or steam requirement. — Ames Iron Works, Inc.

246 Package Fire Tube Unit

Bulletin B-3456 describes in detail boiler with patented wet back construction as pioneered by Titusville. Unique 3-pass design package fire tube unit attains 80 percent plus efficiency, delivering maximum economy, saving space, fuel and care. Adapted for gas, oil, and gas-oil combinations.—The Titusville Iron Works Co., Div. of Struthers Wells Corp.

247 Package Steam Generator

Bulletin B-3255 describes and illustrates water tube package steam generator, completely assembled, shipped as a package unit, easily installed. Efficient 2-drum design is available in capacities up to 100,000 lb per hr of steam, with the Titusville package burner or other leading burners for gas, oil, and gas-oil combinations.—The Titusville Iron Works Co., Div. of Struthers Wells Corp.

248 Packaged Automatic Boilers

Fully illustrated catalog covers type FD "Webco Ray" packaged automatic boilers for firing oil, gas or combination gas/oil. Sizes 40 to 600 hp. Local service is through franchised distributor system. Catalog gives all dimensions, ratings and other data.—Western Boiler Co.

249 Packaged Boilers

Twelve page catalog describes type AS Superior packaged water tube boilers for capacities from 4000 to 21,000 lb per hr of steam. Complete packages with rotary burners, integrated controls, soot blowers, refractory, and insulation, these units also have quiet rear-mounted draft fan which provides air cooling of furnace floor. — Superior Combustion Industries, Inc.

250 Packaged Boilers

New illustrated catalog describes "Webco-Ray Husky" series packaged boilers in sizes 20 to 125 hp. All units are completely automatic and burn all grades of fuel oil, natural gas or combination gas/oil.—Western Boiler Co.

A wealth of information and data available to consulting engineers, contractors, and engineers with plants and big buildings is represented by the over 700 catalogs, bulletins and manuals described in this supplement to Heating, Piping & Air Conditioning. Use the reply cards on pages 2-31 and 2-33 to request your copies.

251 Packaged Coal-Fired Boilers

The full line of "Coal-Pak Automatic" packaged unit boilers for burning low cost bituminous coal are described in 10 page bulletin 1100. Combustion controls as well as automatic coal feed and ash removal systems for rapidly following changing load demands are described. Units are available for low or high pressure service in sizes from 71.6 to 300 hp. — The International Boiler Works Co.

252 Packaged Hot Water Boiler

Type CC Superior packaged boilers designed for hot water operations and for capacities from 670,000 to 11,720,000 Btu per hr are described in this catalog. Burning gas, oil, or both, the type CC is equipped with a newly developed venturi action mixing tube which overcomes the problems developing from improper boiler circulation. —Superior Combustion Industries, Inc.

253 Packaged Steam Boiler

Type CC Superior packaged steam boilers for capacities from 20 to 350 bhp are described in this catalog. A completely packaged unit which will burn gas, oil, or both, the type CC combines simple installation with high efficiencies and operating economy. Although designed for limited space conditions, the type CC makes no concession to quality.—Superior Combustion Industries, Inc.

254 Packaged Water Tube Boilers

Two complete lines of low and high pressure, forced draft water tube package boilers are described in bulletin 1400. The "Compak" series of fire-tested units for oil and/or gas is offered in 22 sizes ranging from 12 through 750 hp. Engineering specifications are included. — The International Boiler Works Co.

255 Radiation

Condensed catalog containing two pages of information on each model of Shaw-Perkins "Panel-Vector" and "Airadiator" radiation. Descriptions, specifications, dimensions, ratings, etc. are included. Offers full literature on each model. — Shaw-Perkins Mfg. Co.

256 Reducing Valve

Bulletin 561C covers "No-Maintenance" reducing valve with only two moving parts. High accuracy of regulation, patented long travel spiroflex metal diaphragms, inlet pressures up to 300 psi, 550 F and reduced pressures to 299½ psi. Available in cast iron or bronze, screwed or flanged, size ranges from ½ to 4 in.—Leslie Co.

257 Remote Operation of Valves

For those concerned with valves and piping, bulletin sheet details Babbitt adjustable sprocket rim with chain guide, a simple device for remote operation of overhead or otherwise out-of-reach valves. Gives price list, ordering directions and cites accident reduction, waste prevention and simplification of piping layout.—Babbitt Steam Specialty Co.

258 Safety Controls for H.W. Heating Boilers

Engineering information in easy-to-follow form, that tells why safety devices are needed on hot water space heating boilers, which ones to use, and how to select them is given in bulletin P-30C. Liberally illustrated with drawings and diagrams. — McDonnell & Miller, Inc.

259 Safety Controls for Steam Boilers

Bulletin L-711 answers practically all safety control problems encountered in the low pressure steam boiler field. Tells the story in simple diagrams and equally simple explanation. Covers everything from residential through multiple commercial and industrial boiler jobs. — McDonnell & Miller, Inc.

260 Steam Boilers

Steam boilers available in gas, oil or combination gas/oil fired for high or low pressure application are furnished fully packaged with all controls wired ready for connection to utilities. Steel water tube design, 1½ to 150 hp.—Sid E. Parker Boiler Mfg. Co., Inc.

261 Steam Coils

Bulletin M-10 contains information on new Marlo "Evntemp" distributing steam coils for modern heating systems using modulating or two position controls. Unique design provides even temperature throughout entire face area, even when partially throttled during light loads, with precise control.—Marlo Coil Co.

262 Steam Generator

Bulletin B-3250B gives performance data and descriptive information on "Ticotherm" steam generator. This modern design 2-drum unit with water cooled furnace wall tubes is both economical and efficient in operation, compact where space conditions and headroom are a limiting factor in the boiler room. Adaptable to stoker firing, gas, oil, and gas-oil combinations.—The Titusville Iron Works Co., Div. of Struthers Wells Corp.

263 Steam-Water Service Engineer's Manual

Forty-four page manual contains schematic drawings, technical descriptions and reply cards for requesting additional information on control systems for domestic hot water, fuel oil heaters, heat exchangers for cooling, instantaneous heat exchangers, jacket water cooling, process hot water, pressure reducing, storage heaters and two-temperature hot water.—The Powers Regulator Co.

• *See the index on the front cover of this supplement to Heating, Piping & Air Conditioning for the classifications of products under which this literature is listed.*

264 Steel Boiler

Packaged Scotch type three-pass steel boiler designed to the latest SBI ratings, in sizes from 20 to 800 hp, for oil/gas combination firing described in bulletin.—Burnham Corp., Steel Boiler Dept.

265 Steel Heating Boilers

Ruggedly constructed line of type A commercial series steel heating boilers in a range of capacities from 945,600 to 9,448,800 Btu net SBI ratings are available with special base heights for all types of fuel burning, and with front head cut and refractory base for low set jobs described in bulletin. Unique peaked firebox design for quick pick-up.—Spencer Heater Div., Avco Corp.

266 Stokers

Bulletin describes and illustrates Detroit underfeed and overthrow spreader stokers for all industrial, institutional and heating plant installations. Wide range of sizes and capacities, the result of 60 years of leadership in the design, manufacture and installation of stokers. — Detroit Stoker Co., Div. of United Industrial Corp.

267 Storage Water Heaters

Catalog 19 describes steel horizontal, steel vertical, copper lined, copper silicon and cement lined "P-K" storage water heaters including complete data for each type.—The Patterson-Kelley Co., Inc.

268 Tank Heaters

Booklet TH-160 on indirect type instantaneous water heaters, their application, selection and installation is a help to those concerned with the problem of furnishing hot water for large commercial, industrial, or institutional buildings.—Bell & Gossett Co.

269 Temperature Regulators

Bulletin 560 illustrates and describes type T direct acting and type AT pilot operated self-contained temperature regulator, also combination pressure and temperature regulators, types PTT, PTS and PTM available in either bronze or semi-steel body with stainless steel pilot valve, main valve and seat. — O. C. Keckley Co.

270 Tube and Pipe

Catalog gives helpful information on the efficient and economical installation of Revere copper water tube, DWV copper tube, "Dryseal" copper tube, red brass and copper pipe.—Revere Copper and Brass Inc.

271 Unit Heaters

Wilson unit heaters, available in six models in capacities 60,000 to 717,000 Btu, are described in bulletin 60. Unit heater is completely dependable in service where corrosive atmospheres are encountered.—Wilson Engineering Corp.

272 Water Tube Boiler

Line of on-off boilers, called the "Cycle-Modulatic," is described in bulletin 4010. Expensive modulating equipment used on other boilers has been eliminated. Tells how a simple on-off type of boiler may be the economical answer to steam needs. Eight pages.—Vapor Heating Corp.

273 Water Tube Boiler

Bulletin 586-A (12 pages) describes line of fully modulating (4 to 1 turndown) "Modulatic" water tube boilers. Covers compact models in size range from 10 to 160 bhp (334,000 to 5,356,000 Btu per hr.) Explains principle of operation, tells how compactness and reliability are obtained.—Vapor Heating Corp.

Humidification, Dehumidification & Evaporative Coolers

274 Air Washers

"Capillary" air washers, basic to many installations where air is required at controlled conditions, described in section 10. Evaporative cooling minimizes refrigeration needs. Humidification, dehumidification, cleaning, scrubbing gases and fumes also functions of these systems. Refrigeration may be incorporated or added later. "Capillary" cell features high saturation efficiency, low resistance. — Air & Refrigeration Corp.

275 Central Air Conditioning

Engineering catalog with illustrative and descriptive information and complete selection data on central plant conditioners, multizone conditioners, sprayed coil units, heating-ventilating units, cooling and heating coils. This catalog is notebook type and is index tabbed for easy and quick use. — Thermal Engineering Corp.

276 Commercial Evaporative Coolers

Product release announces new evaporative cooler series in commercial sizes that deliver 8500 to 17,000 cfm. Inside coating is baked on asphaltic undercoating for rustproofing. Like other Lennox evaporative coolers, the 18 ga galvanized steel cabinets are finished in "Granitone," an acrylic finish highly resistant to corrosion.—Lennox Industries Inc.

277 Cooling Towers

Bulletin 478 gives complete specifications and selection data on 16 model numbers of dry blower cooling towers from 5 to 360 tons of refrigeration capacity.—Binks Mfg. Co., Cooling Equipment Div.

278 Duct Type Humidification Equipment

Designed for installation in existing or planned duct circulating systems, the standard Walton duct type humidifiers described in this catalog atomize from 3 to 24 lb per hr of water vapor. The catalog offers full engineering information, plus specific application and usage data. — Walton Laboratories, Inc.

279 Electric Humidifier

Mueller "Climatrol" type 50-800 electric humidifier provides for perfect humidity level by manual or humidistat (optional) control. Unit will evaporate up to 26 quarts of water per day — enough for a modern home of 2000 sq ft. — Mueller Climatrol Div. of Worthington Corp.

280 Humidification

Complete data on air-controlled and electrically-controlled unit steam humidifiers for duct or area installations is given in booklet on humidification for profit. Describes problems caused by wintertime dry air and effect on human comfort, as well as on hygroscopic materials. Contains condensed data on humidifier selection, sizing, location, installation. — Armstrong Machine Works.

Over 700 descriptions of catalogs, bulletins and other data available, without obligation, on request are described in these pages. The items are arranged by general classifications and each is titled to make it easy to find the ones of particular interest to you.

281 Humidification

Bulletin is designed to assist architects, engineers and contractors in technical aspects of commercial and industrial humidification. Includes estimating the capacity, sizing and selecting equipment. This bulletin also covers the humidification requirements of more than 70 industrial applications. — Walton Laboratories, Inc.

282 Plastic Moisture Eliminator Blades

Produced in SP009 modified polystyrene and SP010 polyvinyl chloride formulations for applications in removal of discrete moisture from industrial air conditioning systems, moisture eliminator blades are manufactured in types from three bend sections up to six bend sections. Corrosion resistance, ease of cleaning and economy of parts make them most efficient and economical units.—Southern Plastics Co.

283 Saturation Type Air Conditioners

Bulletin 122 describes air conditioning unit which obtains control of humidity and temperature by using saturated air at controlled temperature, thereby determining dewpoint of air leaving saturation chamber and providing for control of moisture by thermostats alone without relying on moisture-sensitive instrumentation. This assures reliability for critical conditions, processes.—Niagara Blower Co.

284 Space Type Humidification Equipment

Catalog covers standard space type atomizing humidifiers, together with application and engineering information for ductless installations. Self-contained humidity stations in several sizes generate from 1 to 24 lb per hr of water vapor. — Walton Laboratories, Inc.

Insulation (& Sun Heat Control)

285 Adhesives for Insulation

Four page catalog contains basic information on a variety of adhesives for bonding high and low density insulation materials to sheet metal ducts: both solvent types and water dispersed adhesive products included. Data on a duct seam sealer for use on high pressure systems is covered.—Minnesota Mining & Mfg. Co., Adhesives, Coatings & Sealers Div.

286 Building Insulation

Twenty page booklet FB-105 on "Foamglas" building insulation contains photographs, case studies and line drawings showing panel details and data on accessories to be used. Chart computing "U" value required to prevent warm condensation, and technical data on construction of roofs, curtain and core walls and wall linings is included.—Pittsburgh Corning Corp.

287 Duct Insulation

Revised catalog ULD describes the use of "Ultralite" long textile type glass fiber insulation for duct wrap and duct liner. Characteristics and application methods, together with available and suggested thicknesses, are listed. Facings available, including new gray fire resistant coating, shipping information and specifications are given. — Gustin-Bacon Mfg. Co.

288 Duct Insulation

Twenty page AIA literature describing the full line of Owens-Corning Fiberglas duct insulation and liners gives complete product description, specifications and application instructions.—Owens-Corning Fiberglas Corp.

289 Equipment Insulation

Sixteen page AIA literature describes the full line of Owens-Corning Fiberglas equipment insulations with complete product description, specifications and application instructions.—Owens-Corning Fiberglas Corp.

290 Expanded Polystyrene Insulation

Eight page brochure, which discusses "Uni-Crest," United Cork Companies' expanded polystyrene insulating material, describes the product, lists its physical properties, gives standard dimensions, and recommends thicknesses for a wide range of temperature conditions. Photos and drawings illustrate various uses and techniques.—Uni-Crest Div., United Cork Companies.

291 Fiber Glass Duct Insulation

Six page form IN-285A describes properties, characteristics and product forms and explains and illustrates application methods for "Microlite" fiber glass duct insulation. Tables show thermal performance, recommended thicknesses, types of available vapor barriers, fire hazard rating and compliance with federal specifications. Johns-Manville.

292 Fiber Glass Duct Liner

Eight page form No. IN-302A describes function of dual density design, acoustical and thermal properties, product characteristics and application methods including tables on thermal conductivity, noise reduction and surface friction coefficients, fire hazard rating, sizes and packaging of "Micro-Bar" fiber glass duct liner. Drawings show construction of integral nosings and shiplap joints.—Johns-Manville.

293 Fiber Glass Duct Liner

Four page folder containing illustrations and table on Johns-Manville fiber glass "Microtex" duct liner has general description, advantages, properties and characteristics. Tables give sound absorption and air friction coefficients, thermal conductivity and standard forms available. Also covered is application procedure and "Microtex" duct wrap.—Johns-Manville.

294 Fiber Glass Pipe Insulation

Eight page form No. IN-237A explains construction and application features and includes a guide to specifications for application and finishing for various types of service for "Micro-Lok" fiber glass pipe insulation. Also given are descriptions of available jacket materials, thermal conductivity curve, and table of sizes.—Johns-Manville.

295 Foamed Plastic Pipe Insulation

Four page bulletin IN-213A describes "Aerotube" foamed plastic pipe insulation and gives data on installation for various types of pipe and tubing, as well as tables of recommended thicknesses and thermal and physical properties.—Johns-Manville.

296 Granular Insulation

Thirty-four page technical data handbook describes advantages of "Insul-Fil" scientifically designed granular insulation specifically for underground systems. Includes general information, installation and thickness specifications, engineering drawings, graphs for determination of heat loss, other pertinent data.—Miracle Adhesives Corp.

297 Industrial Piping and Process Insulation

Twelve page booklet FI-106 outlines application procedure for "Foamglas" cellular glass insulation for industrial piping and equipment and "Foamsil" acid resistant insulating refractory. Contains photos and lists accessory materials and information on physical qualities of "Foamsil" insulating refractory.—Pittsburgh Corning Corp.

298 Insulated Enclosures

Catalog section 50 describes enclosures of "A&R" factory insulated panels, designed to suit the conditions of application, indoor or outdoor use, amount of insulation and ready access. Factory test assembly and match-marking facilitate job site savings.—Air & Refrigeration Corp.

299 Insulation Hangers

Designed to meet the ever-increasing demand for reduced labor costs in general insulation work, "Gemco" and "Tuff-Weld" insulation hangers, available in spindle or prong types, are quickly and easily installed and are positive in adhesion to concrete, brick or metal. Also "Gemco" self-locking washers for spindle type "Gemco" or "Tuff-Weld" hangers.—Goodloe E. Moore, Inc.

300 Insulation for Hot and Cold Piping

Four page booklet introduces "Stay-Dry" pipe insulation with completely new fire retardant jacket for hot and cold piping. Included are actual job photographs, application specifications, suggested thicknesses, available sizes and thicknesses for iron pipe and copper tubing, along with a list of "Foamglas" properties.—Pittsburgh Corning Corp.

301 Pipe Insulation

Thirty-two page AIA literature describes the full line of Owens-Corning Fiberglas pipe insulations with product description, specifications, and application instructions.—Owens-Corning Fiberglas Corp.

302 Prefabricated Glass Fiber Duct

Brochure GBD describes characteristics of "G-B" prefabricated glass fiber duct for heating and cool-

ing. Covered is technical data on thermal conductivity, heat saving and acoustical efficiency, along with illustrations and explanation of general installation procedures. Also listed are available sizes, packaging and shipping information.—Gustin-Bacon Mfg. Co.

303 Preformed Pipe Insulation

Bulletin 37-D illustrates preformed pipe insulation that stops condensation and sweating. Data shows specifications, low K factor, light weight, long life, closed-cell construction and installation methods on new or installed dual temperature pipes and tubes.—Presstite Div., American-Marietta Co.

304 Sealing, Insulating Drain Pans

Technical service bulletin A-2 describes typical properties and method of application for sealing and insulating air conditioner drain pans with "Pioneer" dry mix compound E-8016, which protects metal surfaces against corrosion, insulates, and provides sound deadening qualities.—Witco Chemical Co., Inc.

305 Specifying Aid for Pipe Insulation

"Insulation Specifier" for "Armaflex" flexible foamed plastic pipe insulation with a built in vapor barrier contains product data sheets, specifications, thickness selector and an engineering guide. Film resume sheet briefly describes two informational sound-slide films available for individual viewing or group meetings.—Armstrong Cork Co.

306 Stud Welding System

Four page catalog and applications folder, form G9-19, describes new system of installing insulation rapidly and permanently with Omark portable stud welding equipment. No special wiring, flux, ferrules or compressed air required. Insulation applied using "Insul-Pins" and "Insul-Clips". Won't burn or harm material being welded.—Omark Industries, Inc., Fastening Div.

307 Underground Pipe Insulation

Brochure on "Witcolite" granulated, resilient adhesive material which forms three zones of insulation for underground hot or cold pipes and provides corrosion and water resistance. Cured anticorrosive zone, air pocketed sintered zone, and granular zone provide maximum thermal insulation. Describes advantages, gives installation instructions, typical properties, technical information.—Witco Chemical Co., Inc.

308 Vapor Barriers

Product data on U/L rated, flame resistant vapor barriers of the "Pyro-Kure" line, available for insulation facing, pipe jacketing, etc. Includes typical samples of paper, foil and plastic combinations.—American Sisalkraft.

Motors, Bearings & Drives

309 Ball Bearing Units

Bulletin 758 describes exclusive design and engineering features of SealMaster ball bearing units. The literature has a large exploded illustration with engineering and craftsmanship feature callouts. Bulletin is also highlighted with manufacturing and application photographs.—SealMaster Bearings, A Div. of Stephens-Adamson Mfg. Co.

310 Bearing Units

Bulletin 359 describes the L, SL, LP, LFT SealMaster L series low cost, precision bearing units. The literature features comprehensive engineering and technical data, specifications, photographs and basic mounting arrangement diagrams. Bulletin also offers suggested applications and uses.—SealMaster Bearings, A Div. of Stephens-Adamson Mfg. Co.

311 Dry Fluid Drives

Sure, economical way to start loads smoothly, protect against shock and overload, reduce maintenance costs, described in bulletin A640B on "Flexidyne" dry fluid drives. Centrifugal force wedges steel shot between housing and rotor for 100 percent efficiency at full load speed. Fractional to 100 hp — available from stock. — Dodge Mfg. Corp.

312 Electric Motors

Brochure C-040 describes all types of integral horsepower electric motors including re-rated designs from 1 to 800 hp, a-c motors of squirrel cage and wound rotor types, d-c motors and generators, variable speed drives, gearmotors and high frequency equipment.—Electro Dynamic Div. of General Dynamics Corp.

313 Flexible Couplings

Catalog 501 describes "Amerigear" and "American" flexible shaft couplings used in coupling together mechanical power transmission equipment. Includes pertinent specification data such as ratings, dimensions, selection tables and special flexible coupling types. Describes in detail the exclusive "Amerigear" fully-crowned gear tooth form. — Zurn Industries, Inc., Mechanical Power Transmission Div.

314 Flexible Cushion Coupling

The "four-way-flex" of unique "Para-flex" coupling described in bulletin A669C compensates for end float, parallel and angular misalignment, or any combination. Also absorbs torsional vibration, reducing noise and protecting machinery. Rubber tire-like flexing member mounted between semi-steel flanges which fasten to shafts with "Taper-Lock" bushings. No lubrication, maintenance. — Dodge Mfg. Corp.

315 Fractional Horsepower Motors

Four page bulletin SB-177 showing construction and design details of single phase and polyphase motors for the heating, ventilating and air conditioning industry in 48 and 56 frame. — Marathon Electric Mfg. Corp.

316 Hermetic Motors

Bulletin covers 1½ to 150 hp rotor stators for hermetically sealed compressors.—A. O. Smith Corp.

317 Integral Compressor Motors

Integral compressor motors, in sizes 1 to 800 hp, open, totally enclosed fan cooled, and explosion-proof types, are described in bulletin.—A. O. Smith Corp.

318 Integral Horsepower Motors

Four page bulletin SB-186 showing construction and design details of integral horsepower motors from frames 364U through 445US. Complete with ratings and dimensions. — Marathon Electric Mfg. Corp.

319 Motor Application Guide

Sixteen page application guide bulletin 270B outlines electric motors ranging in size from 1/20 to 400 hp. Includes polyphase, single phase and direct current motors. Factors to consider in motor selection are discussed along with numerous motor selection charts.—Century Electric Co.

320 Motor Control

Condensed price catalog lists the commonly used electric motor control up to and including the size 4 rating, plus pushbuttons, limit switches and other accessories applicable to heating, piping, and air conditioning.—Allen-Bradley Co.

321 Motor Selector

Howell motor selector bulletin L-1661A lists selection and specification data for complete a-c motor line, 1/40th to 300 hp; standards and specials; wide range of voltages, speeds, mountings, enclosures. Also, gearmotors, speed reducers, generators and industrial grinders. — Howell Electric Motors Co.

322 Motor and Starter Combinations

Bulletin MU-251 covers Wagner increment motor and starter combinations which permit full voltage, reduced current starting of squirrel cage motors without opening the line during the starting period. Descriptive data, charts and illustrations concisely describe the application and operation of the combinations.—Wagner Electric Corp.

323 Motors

Catalog AEB 1059 is designed to assist motor users, re-sellers, and specifiers in the preliminary selection of a suitable motor. A wide range of motors is illustrated and a number of mechanical variations are shown. — Fairbanks, Morse & Co.

324 Motors

Booklet B-7640-A describes motors using solventless epoxy insulation materials. Color illustrations of cutaway stator sections show entire windings completely encapsulated by this material.—Westinghouse Electric Corp.

325 Motors

Booklet B-7876, "Questions and Answers on 'Guardistors' Motors," gives complete information on new system of motor protection which uses a temperature sensing device buried in the motor windings.—Westinghouse Electric Corp.

326 Pillow Blocks

Bulletin 1058 describes exclusive design and engineering features of SealMaster LP pillow block, L series and SL series bearing units. The literature highlights the economy, performance and quality of these low cost, precision units. Bulletin features comprehensive engineering and technical data, specifications and photographs of the new bearing units.—SealMaster Bearings, A Div. of Stephens-Adamson Mfg. Co.

327 Protected Integral Hp Motors

Four page bulletin SB-180 showing construction and design details of 4-in-1 integral horsepower motor in frame sizes from 182 through 326U. Shows typical performance curve and ratings and dimensions. 4-in-1 protection, splashproof, weather protected, guarded and drip-proof. — Marathon Electric Mfg. Corp.

328 Quality Control for Motors

Bulletin Q-50 describes new quality control procedures for industrial electric motors that were developed from a program producing the higher standards of quality and dependability necessary for atomic power submarine motors. Includes wire, bearing, environmental and winding testing, etc. —Electro Dynamic Div. of General Dynamics Corp.

329 Totally Enlosed Motors

Bulletin B-030 describes re-rated totally enclosed, non-ventilated and fan cooled motors, both standard and explosionproof designs. Includes special quality control operations assuring extra dependability. Cutaway view of a 60 hp TEFC frame 405U featured in the centerfold.—Electro Dynamic Div. of General Dynamics Corp.

330 V-Belt Drive

Single, endless V-ribbed belt of "R M Poly-V" drive runs smoothly over grooved sheaves to deliver more power in the same space with reliability. Eliminates excessive vibration, noise, belt and sheave wear, and length matching problems; drive life is much longer and two cross sections fulfill every heavy duty requirement for industrial air conditioning blowers, pumps and compressors.—Raybestos-Manhattan, Inc., Manhattan Rubber Div.

331 V-Belt Drives

New "Dyna-V" compact V-belt sheaves and belts, capable of handling up to three times as much horsepower in given space described in bulletin A695A. "Taper-Lock" bushings for quick, sure mounting. Available from stock in two groove sizes for capacities up to 200 hp. Drives up to 1500 hp furnished on order. — Dodge Mfg. Corp.

Odor Control, Air Freshening

332 Dust and Odor Filter Frame

Product data sheet 131 illustrates new Cambridge "Aerosolve"-charcoal filter frame specially designed to simplify installation and servicing of the two types of filters. Available for charcoal filter of user's choice or as complete packaged unit. —Cambridge Filter Corp.

333 Odor and Corrosion Inhibitor

Service report B-6686 describes Oakite composition 55-M which contains germicidal and water treating ingredients blended with chromium salts for inhibiting odors, slime and corrosion. It is safe on surfaces common to air washing systems and usually also limits deposits of scale.—Oakite Products, Inc.

334 Odor Neutralizer

Sixteen oz. aerosol can of "Neutrode" spray is used to neutralize fuel oil and gasoline odors, warm air and air conditioning equipment to destroy mildew and fungus odors.—The Tankit Co., Inc.

335 Portable Air Purification Units

Two page data sheet T319 describes and illustrates portable, self-contained canister, air purification units for odor problems in smaller areas. Specifications for four sizes handling 15, 40, 60, and 120 cfm are tabulated. Adsorbent is activated charcoal. Recommended for hospitals, funeral homes, other similar trouble spots.—Mine Safety Appliances Co.

336 Purification Equipment

Bulletin 108A describes and illustrates "Dorex" activated carbon air purification equipment, C cells and H canisters and gives data on equipment selection, installation and application. Included is information on replacement service and discussions of activated carbon and conditions for proper purification.—Connor Engineering Corp.

Parts, Clamps, Anchors, Bolts, Screws, Etc.

337 Drill Anchors

All steel "Bulldog" expansion anchors with specially machined teeth serve as both drill and anchor. Special plating provides anti-corrosive protection.—Gregory Industries, Inc.

338 Drill Screws

Four page bulletin describes new "Drill-Screw" that drills its own hole in sheet metal. Manufactured in five sizes. Tips on "Drill-Screws" and drill chucks are given, and net prices are shown. — Duro-Dyne Corp.

339 Drive Anchors

All steel "Blue Chip" nail-anchor, specially plated, with positive expansion at the bottom of the hole can be used with all types of masonry.—Gregory Industries, Inc.

340 Electrolytic Zinc Coated Steel Sheets

Eight page bulletin 572 on "Weirzin" electrolytic zinc coated steel sheets describes the many uses this product has for painted cabinets, baseboard heating panels, space heaters, etc. Recommended for unpainted, painted parts.—Weirton Steel Co.

341 Metal Framing System

Fully illustrated 180 page general engineering catalog 5 (pocket size version, 810) gives a complete presentation of the Unistrut metal framing system and shows all channels, parts and fittings, as well as application engineering and specifications.—Unistrut Products Co.

342 Stud Drivers

Powder actuated method of fastening to concrete and steel. Available are "Nelson" stud drivers in 0.22 cal. and 0.25 cal. models, and all types of fasteners.—Gregory Industries, Inc.

• Be sure to include your name and address when you use the reply cards to request copies of these bulletins.

343 Surface Anchors

Four page bulletin 3 describes application of surface anchors bonded with Miracle anchor adhesive. Anchors have zinc coating with dichromate finish to resist corrosion. Eliminates delamination, sagging of glass fiber and soft board types of insulation, eliminates drilling, welding, expansion bolts; won't damage surfaces if installation must be removed.—Miracle Adhesives Corp.

344 Surface Metal Raceways

Six page catalog FL-1 gives detailed presentation of the use of Unistrut metal framing as supports for fluorescent fixtures and other types of lighting, and as surface metal raceways.—Unistrut Products Co.

Pipe, Tube, Hose & Conduit

345 Acid Waste and Drainage System

New 20 page engineering and parts catalog covers sinks, traps, pipe and fittings, adapters, and other products with section on "Polyfusion" method of joining "Vulcathene," complete permanent acid and corrosion resistant waste and drainage system of plastic equipment. Gives technical and dimensional information, installation notes, thread sizes, chemical resistance and other helpful information.—American Vulcathene Div., The Nalge Co., Inc.

346 Brass and Copper Pipe, Tubes

Information is given on Anaconda brass, and copper pipe, copper tubes and fittings. Includes size and weight tables for standard pipe and copper tubes. Radiant panel heating and sanitary drainage lines are discussed.—Anaconda American Brass Co.

347 Brass and Copper Tube and Pipe

Catalog is useful guide for heating, refrigeration, air conditioning, plumbing and architectural specifications and contains detailed data on copper water tube, drainage tube, commercial brass and copper tube, copper refrigeration tube, integral finned tube and precision small gage seamless tube. Included is information and technical data on red brass, copper and threadless pipe.—Reading Tube Co.

348 Copper Tube

New ACR copper tube has been designed expressly for air conditioning and refrigeration applications. It is a cleaned and sealed tube available in 20 ft straight lengths in sizes from $\frac{1}{4}$ in. nominal OD to 4 in. inclusive. Color coded to indicate its primary use.—Wolverine Tube, Div. of Calumet & Hecla, Inc.

349 Corrosion Resistant Pipe

Duriron pipe is a high silicon iron alloy that is corrosion resistant to practically all commonly used process chemicals and is used extensively for acid proof waste lines. Available in split flanged, sizes 1 to 8 in. Sizes to 16 in. on special order. Bell and spigot sizes $1\frac{1}{2}$ to 15 in. Fittings and caulking available.—The Duriron Co., Inc.

350 Corrosion Resistant Pipe and Tubing

Catalog describes analyses and grades of tubing and pipe available in the following size range: Pipe — $2\frac{1}{2}$ to 30 in. IPS in Schedules 20 through 160; 5 to 30 in. IPS in Schedules 5 and 10. Tubing — 3 to 5 in. OD with walls 0.154 to 0.375 in.; 5 to 48 in. OD with walls 0.050 to 1 in. Engineering data and tables are also included. — C. A. Roberts Co.

351 Design Properties of Pipe

Bulletin TT 330 gives tabulations of complete dimensional data and design properties of steel pipe sizes for determining required wall thicknesses, bending stresses, pipe column sizes, flow areas and surface areas. Included are dimensions of seamless and welded steel pipe, welding fittings and flanges, and table of conversion factors.—Tube Turns, Div. of Chemetron Corp.

352 Electrical Conduit

Twenty page folder DEK-3 thoroughly covers plastic armored electrical conduit, "Dekoron-Coated" E.M.T. and rigid steel conduit. Engineering data chart gives corrosion resistance, mechanical and electrical properties, along with photographs showing details of the ease of installation. Complete installation instructions, bending procedure, and advantages, are included.—Republic Steel Corp., Steel and Tubes Div.

353 Electrical Raceways

Catalog SA-EMT-60 describes various types of electrical raceways, including "Electrunite" electrical metallic tubing (E.M.T.), the lightweight threadless conduit; rigid steel threaded conduit; "Dekoron-Coated" (plastic armored) E.M.T. and rigid conduit, and plastic pipe. Also given are suggested conduit specifications, application photographs, dimensions and weight tables, and brief descriptions of bending tools.—Republic Steel Corp., Steel and Tubes Div.

354 Fitting and Flange Specifications

Forty-eight page brochure FB 77A summarizes most commonly used ASME and ASA specifications for welding fittings and forged steel flanges. Intended as an aid in computing preliminary design requirements for pressure piping systems.—Babcock & Wilcox Co., Tubular Products Div.

355 Flexible Connectors

Sixteen page bulletin TC-101 describes flexible connectors with core of "Teflon," stainless steel braid covering. Used for conveying hydraulics, pneumatics, chemicals, steam and as conduit. Outline drawings and specifications on standard assemblies included.—Anaconda Metal Hose Div., Anaconda American Brass Co.

356 Flexible Rubber Pipe

"Condor" flexible rubber pipe outlasts steel and is made in types to withstand pressures up to 250 psi. Installation is easy, economical and with no danger of leaky joints at pipe bends. New "Hydro-Lok" built-on flanges offer full sealing surface plus advantage of sure alignment and easy rotation of pipe to equalize wear without removing flange bolts.—Raybestos-Manhattan, Inc., Manhattan Rubber Div.

357 Flexible Rubber Pipe Connections

Two page bulletin RFP-10 describes "Quiet-Flex" reinforced flexible rubber pipe connections which provide good way to eliminate water line noises, vibration, electrolysis, expansion and contraction. Noise and vibration from operating equipment normally transmitted through pipe line is controlled by introducing rubber pipe with a different mechanical resistance to sound conductivity.—Vibration Mountings, Inc.

358 Handbook of Tubular Products

Compact handbook 393-B, 40 pages, 6 x 9 in., contains dimensions, weights, test pressures, and specifications for Bethlehem continuous butt-weld and Bethlehem electric resistance weld steel pipe. Standard and tentative specifications for welded and seamless steel pipe are also included. — Bethlehem Steel Co.

359 Heat Exchanger, Condenser Tubing

Eight page brochure TB-329B contains a specification and data chart on the various grades of seamless and welded tubes manufactured by B & W, ranging from carbon through stainless steel. Booklet also discusses installation of heat exchanger and condenser tubes by the expanding method.—Babcock & Wilcox Co., Tubular Products Div.

360 Heat Exchanger Tubing

Eight page brochure TB-431 introduces unique "Lectrosonic" heat exchanger tubing of electric resistance welded carbon steel. Gives details of its manufacturing and testing procedure, pointing out features which make it particularly well suited for heat exchanger use.—Babcock & Wilcox Co., Tubular Products Div.

361 Hose, Metal Hose, Plastic Pipe

Catalogs WH and MH cover water hose for high or low pressures, hydraulic, acid and flexible metal hose. Included is flexible rubber pipe and duct and flexible and semi-rigid plastic pipe.—Goodall Rubber Co.

362 Ice Skating Rinks

Thirty-two page bulletin, "Ice Skating Rinks, Their Construction and Maintenance," discusses ice rink corrosion problems, rink maintenance, reviews service records, spells out difference between open and permanent floor type construction, and illustrates graphically the service life of wrought iron and another ferrous piping material. —A. M. Byers Co.

363 Pipe for Plant Fire Lines

Eight page illustrated brochure TR-253A gives specific information on "Transite" pipe for plant fire lines, its properties, acceptance and installa-

This quarterly trade literature supplement to Heating, Piping & Air Conditioning describes catalogs, bulletins, and other data available, without obligation, to readers on request. The descriptions are grouped according to general classifications of subjects or equipment, as indicated on the front cover of this supplement.

Each month, regular editorial departments in Heating, Piping & Air Conditioning are devoted to Equipment Developments and to Recent Trade Literature announced by all manufacturers serving the field of heating, piping, and air conditioning.

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tion procedures. Included is large diagram of typical industrial fire protection system, data for design engineers and guide specifications.—Johns-Manville Sales Corp.

364 Pipe for Storm Water Drainage

Ten page folder TR-252A describing, illustrating Johns-Manville "Transite" asbestos-cement pipe for storm water drainage and storm sewer systems for control of rain from roof level to outfall. Covers economic advantages. Contains job photographs, system diagrams, information about "Transite" fittings available to complete installations. Also design data, guide specifications. — Johns-Manville Sales Corp.

365 Pipe and Tubing

Thirty-two page stock list catalog on copper and brass products gives sizes of sheet, roll, strip, rod, wire, tubing, pipe, roofing materials and other related products with applicable gauge and weight data.—C. G. Hussey & Co. (Div. of Copper Range Co.)

366 Plastic Pipe

ADV. 965 provides complete information on Republic semi-rigid SRK plastic pipe; outlines its advantages, giving special emphasis and detailed information on ease of joining; includes complete technical data on pipe and fittings. Among the many uses described are water service and drain lines, and vent pipes for sewers and plumbing fixtures.—Republic Steel Corp.

367 Plastic Pipe, Fittings, Valves

Sixteen page illustrated booklet contains complete information on the use of "Van-Cor 1" and "Van-Cor 2," chemical resistant, normal and high (respectively) impact, unplasticized polyvinyl chloride. For pipe, fittings and valves. Contains accurate schedule charts, flow charts and other information.—The Colonial Plastics Mfg. Co., Van Dorn Iron Works.

368 Polyethylene Pipe

Fourteen page bulletin 29 describes National polyethylene pipe and explains its properties, application, chemical resistance, temperature and pressure limitations, and gives installation instructions. —National Tube Div., United States Steel Corp.

369 Presealed Conduit

Presealed Porter-Hayden conduit for underground piping that is non-corrosive, watertight, and immune to electrolysis is available including all necessary elbows, expansion loops, anchors, etc. The outer casing, fittings, and all internal pipe supports are asbestos cement. Designed for severe ground water conditions.—H. W. Porter & Co., Inc.

Use the handy postage-paid reply cards on pages 2-31 and 2-33 to request copies you want.

370 PVC Drain Pipe

Four page folder contains complete data on the application of "Tuftite," polyvinyl chloride plastic sewer and drain pipe. Illustrates where pipe can be used and installation instructions, sizes and dimensions and general information are given.—The Colonial Plastics Mfg. Co., Van Dorn Iron Works.

371 PVC Pipe

Forty page illustrated bulletin 24 gives comprehensive discussion about normal impact and high impact polyvinyl chloride as a piping material with respect to their properties, chemical resistance, application, temperature and pressure limitations, and installation procedures.—National Tube Div., United States Steel Corp.

372 Radiant Heating and Snow Melting

Sixty-eight page illustrated bulletin 19 gives practical discussion of radiant heating and snow melting, including heat losses, temperature studies, design data, questions and answers, illustrations of methods of floor and ceiling installations, coil patterns, heat transmission tables.—National Tube Div., United States Steel Corp.

373 Radiant Panel Heating with Steel Pipe

A 48 page booklet describing radiant panel heating and giving information on design and suggestions for laying out and installing steel pipe for such systems. Contains a question and answer section.—Committee on Steel Pipe Research.

374 Seamless Light Wall Tube

Eight page brochure on recent development called "Strubing," a seamless light wall tube which will be produced in most metals. It is processed in strip form and rolled up for compact shipment. Techniques used to expand the strip into tubular form, the alloys being worked on, fabrication, sizes, etc. covered.—Wolverine Tube, Div. of Calumet & Hecla, Inc.

375 Stainless Steel Tubing and Pipe

Sixty page book, STP-1, has complete information on Republic's "Electrunite Enduro" stainless steel tubing and pipe. Manufacturing processes and applications described in detail. Design data, corrosion resistance tables, fabricating helps included. Specifications covering tubing and pipe are listed and briefly outlined. Many photographs illustrate various points of manufacturing and use.—Republic Steel Corp., Steel and Tubes Div.

376 Stainless Steel Tubing and Pipe

Complete catalog on "Electrunite" stainless tubing and pipe which includes the following information: Development and classification of stainless steels, properties of tubing, analyses, fabricating data, tubing data tables and engineering data. — C. A. Roberts Co.

377 Steam Condensate Lines

Thirty-two page brochure, "The Use of Wrought Iron Steam Condensate Lines," explains how oxygen and carbon dioxide affect metal pipe; details how to minimize corrosion in steam condensate lines; gives comparative service records in both commercial building and industrial plants; and points out where and how long wrought iron pipe has been in condensate service.—A. M. Byers Co.

378 Steel Couplings and Pipe

New bulletin gives sizes, lengths, threads, weights and carton content of Wheatland steel pipe couplings plus complete specifications on Wheatland steel pipe, including standard, extra strong, double extra strong and structural pipe. Illustrated, file-size bulletin printed in two colors on durable stock for easy reference.—Wheatland Tube Co.

379 Steel Pipe

Advantages and applications of Republic steel pipe, both continuous butt weld and electric resistance weld, are presented in ADV. 1081, which includes data on dimensions, weights, test pressures. Installations for such uses as waste, vent and drain lines, radiant heating, snow melting, fire protection systems and structural applications described. —Republic Steel Corp.

380 Steel Pipe

Booklet tells complete story of why Wheeling steel pipe is easy to use, hard to abuse, how it is made, its advantages, weights, dimensions, where it can be used, test pressures, etc. Included are photographs and technical data, tables and other buying information.—Wheeling Steel Corp. and Wheeling Corrugating Co.

381 Steel Pipe Snow Melting and Ice Removal

A 32 page booklet covering the use of steel pipe for snow melting and ice removal installations. It contains design information and discusses good installation practices. It is well illustrated and carries a question and answer section. — Committee on Steel Pipe Research.

382 Thermoplastic Pipe and Tubing

Described is extruded pipe and tubing in all thermoplastic materials ½ to 12 in. diameter used as ducts, conduits or conveyors. Prices depend upon quantity of any product and size purchased as well as the particular material.—Southern Plastics Co.

383 Tile Conduit

Field erected "Therm-O-Tile" tile conduit of terra cotta tile and masonry materials which give it exceptionally long life in normal ground conditions is of extra strength and durability for underground piping. Built up on a concrete slab, it has cast iron internal pipe supports, anchors and guides.—H. W. Porter & Co., Inc.

384 Tube and Pipe

Catalog gives helpful information on the efficient and economical installation of Revere copper water tube, DWV copper tube, "Dryseal" copper tube, red brass and copper pipe.—Revere Copper and Brass Inc.

385 Tubular Products for Process Industries

Sixteen page bulletin TB-417 contains charts of the properties of B & W tubing and pipe, fittings and flanges in carbon, alloy and stainless steels. Discusses selection and application of process tubing.—Babcock & Wilcox Co., Tubular Products Div.

386 Wrought Iron Pipe

Thirty-two page bulletin, "Piping for Permanence," describes the use of wrought iron pipe for heating, plumbing and other miscellaneous piping and equipment used in building construction, with a section on design and installation. Outlined are the essentials of water analysis, interpretation of the analysis, types of water and water treatment, and wrought iron service records. —A. M. Byers Co.

YOUR COMMENTS ARE REQUESTED

Your comments on this trade literature supplement to Heating, Piping & Air Conditioning will be most welcome, and we invite you to write us. We'd like very much to know if you find this service useful, and how we can improve upon it.

For example, are the descriptions of the catalogs, bulletins and other data arranged conveniently? Are they so classified as to be of the most value to you? Did you fail to find something you were looking for? Are the items themselves complete enough? Or too complete?

Address your remarks to Trade Literature Supplement, Heating, Piping & Air Conditioning, 6 N. Michigan Ave., Chicago 2, Ill. And thanks for your help.

Piping Specialties, Steam Traps, Expansion Joints, Pipe Hangers, Etc.

387 Air Chambers for Water Piping

Folder describes new "Tap/Trap" one piece, ready to use air chamber for new or old water systems, which is produced by patented spun-end process. Installed on risers and branches, it uses air cushion to absorb shock and hammer. Available in 6 in. and 12 in. lengths, longer lengths can be produced for special requirements.—Wolverine Tube, Div. of Calumet & Hecla, Inc.

388 Ball Joints for Thermal Expansion

Eight page bulletin 31 illustrates the use of ball joints for connections to boilers, burners, etc., where thermal expansion and/or contraction create piping problems. Line drawings, dimension tables and photographs are included to describe basic piping arrangements adaptable to almost any piping application.—Barco Mfg. Co.

389 Building Drainage Products

Bulletin 56-1 describes Zurn "Thinline" systems for supporting wall type fixtures; roof drains; floor drains; interceptors; "Supremo" cleanouts; "Inspecdor"; "Shoktrol"; hydrants; swimming pool equipment; and pipe line strainers. Includes engineering drawings, photographs, dimensions, specification and application information. — Zurn Industries, Inc., Plumbing Products Div.

390 Centrifugal Blowdown Separator

Wilson centrifugal blowdown separator, described in bulletin 30, is the answer to safe, economical boiler blowdown. It is used in place of a conventional blowdown tank or basin. — Wilson Engineering Corp.

391 Expanded Polystyrene Insulation

Eight page brochure, which discusses "Uni-Crest," United Cork Companies' expanded polystyrene insulating material, describes the product, lists its physical properties, gives standard dimensions, and recommends thicknesses for a wide range of temperature conditions. Photos and drawings illustrate various uses and techniques.—Uni-Crest Div., United Cork Companies.

392 Expansion Compensators

Bulletin 205 describes new high pressure expansion compensators in stainless steel and bronze. Designed to replace previous methods, such as slip joints, swing joints, pipe loops, or bends; units available for pressures to 175 psig, temperatures from −60 to 250 F, with 1¾ in. compression and ¼ in. extension. — Flexonics Corp. (A Subsidiary of Calumet & Hecla, Inc.)

393 Expansion Joint Design Guide

Twenty-eight page expansion joint design guide 182 covers engineering application and selection data. A discussion of the various types of expansion joints on the market, types of pipe line motion solved by expansion joints, expansion joint design considerations, installation instructions, and selection data is included in publication.—Flexonics Corp. (A Subsidiary of Calumet & Hecla, Inc.)

394 Expansion Joints

Complete catalog on "Gun-Pakt" expansion joints which can be serviced and repacked while under full steam pressure; no need to shut down line or interrupt service. Gives full description, specifications, installation and maintenance data.—Yarnall-Waring Co.

395 Expansion Joints

"Ram-Pak" new design slip type expansion joints give five advantages: one point lubrication, lubricant dispersion ring for uniform lubrication of packing, removable construction of packing chamber permits removing packing without removing joint from line, rugged outward limit stop provided by internal guide and support base conforms to ASA standards.—Yuba Consolidated Industries, Inc.

396 Expansion Joints

Seventy-two page catalog 56 covers the design, manufacture, application of packless corrugated expansion joints. New self equalizing, duo equalizing, and high pressure toroidal expansion joints, and nine other types are covered. Tables and charts give complete engineering specifications; a useful selection chart tells how to choose the right joint for given set of conditions.—Zallea Brothers.

397 Externally-Internally Guided Joint

Bulletin 57-50 describes the new "Adsco Ram-Pak" externally-internally guided expansion joint. Contains price list, eight tables of dimensions with drawings, a cutaway photograph with call-outs, and a weight table.—Yuba Heat Transfer Div., Yuba Consolidated Industries, Inc.

398 Hangers for Piping, Equipment

Two page illustrated bulletin RH-10 gives complete technical data on neoprene in shear hangers with selection table for piping and air conditioning equipment for reducing noise, shock and vibration.—Vibration Mountings, Inc.

399 Heating and Cooling Products

New 26 page "Hydro-flo" products catalog CG-1259A gives complete information about booster and universal pumps, relief and reducing valves, "Monoflo" and "Airtrol" fittings, water heaters and other hydronic specialty equipment.—Bell & Gossett Co.

400 Hose Design Guide

Thirty-six page design catalog 170 covers application and selection of metal hose. Various end fittings are illustrated and described. — Flexonics Corp. (A Subsidiary of Calumet & Hecla, Inc.)

401 Metal Framing

Thirty-six page construction and maintenance handbook 710 covers applications of Unistrut metal framing in the mechanical and electrical fields such as attaching to structures, rigid frames, trapezes, hangers, equipment mounting, tubing supports and concrete inserts.—Unistrut Products Co.

402 Packless Expansion Joints

Robertshaw packless expansion joints for water or steam are described in bulletin 65. Pipe sizes ¾ through 6 in. Working pressures to 150 psig. All metal seamless bellows, multi-ply for greater flexibility at higher pressures and longer life. Brass, monel, stainless steel materials available. — Fulton Sylphon Div., Robertshaw-Fulton Controls Co.

403 Packless Expansion Joints

Forty page "Adsco" bulletin 59-50A describes "Corruflex" packless expansion joints in detail. Included are 32 pages of tables which assist in ordering them and also simplify the design and engineering of complete piping systems. Illustrations, tables, diagrams and photographs included. —Yuba Heat Transfer Div., Yuba Consolidated Industries, Inc.

404 Pipe Hangers and Supports

Catalog PH58, 128 pages, shows illustrations, sizes, weights, capacities for rigid, adjustable, variable spring and constant support hangers; clamps, rolls, clevises, screw eyes and clips; flanges, rings, brackets, concrete inserts for supporting piping. Whether you're hanging 55 tons of main steam or ¼ in. copper tubing, what you need is shown. — Grinnell Co., Inc.

405 Pipe Line Strainers

Four page bulletin 1210 covers four basic types of pipe line strainers for condensate, steam, water, oil, air, gas or other piped fluids and details construction and operating features of a range of y-type strainers designed to protect steam traps, pumps, control valves, compressors, and other equipment against dirt, scale, or metal chips. —Sarco Co., Inc.

406 Power and Process Piping

New 24 page bulletin 60-B features facilities and procedures for the fabrication and erection of power piping systems and industrial process piping. Profusely illustrated with photographs of actual installations and equipment for producing carbon and alloy steel piping in all sizes. — Midwest Piping Co., Inc.

407 Remote Operation of Valves

For those concerned with valves and piping, bulletin sheet details Babbitt adjustable sprocket rim with chain guide, a simple device for remote operation of overhead or otherwise out-of-reach valves. Gives price list, ordering directions and cites accident reduction, waste prevention and simplification of piping layout.—Babbitt Steam Specialty Co.

408 Rubber Expansion Joints

"R/M" rubber expansion joints absorb pipe movement and respond to the slightest pressure, thereby preventing stress and strain on pipe and fittings that may be trouble-makers in ventilating and air conditioning systems. They also insulate components against destructive vibration and noise while compensating for misalignment.—Raybestos-Manhattan, Inc., Manhattan Rubber Div.

409 Safety and Relief Valves

Bulletin 660 illustrates and describes safety relief valves. Safety valves are approved by American Society of Mechanical Engineers suitable for steam and air service with relief valves suitable for liquid service. Valves furnished in either bronze or cast iron body with screwed or flanged connections. — O. C. Keckley Co.

410 Self-Aligning Swivel Joints

Twelve page catalog 265 contains complete information on Barco standard series 600 and 850 self-aligning swivel joints for connections to burners, etc. Includes dimension and pressure tables and photos to illustrate various applications where self-aligning swivel joints are being successfully used.—Barco Mfg. Co.

411 Stainless Steel Bellows

Comprehensive catalog which includes application and engineering data on laminated stainless steel bellows. Included is data on expansion compensators, expansion joints, vibration absorbers, flexible connectors and pipe guides. — The U. S. Flexible Metallic Tubing Co., Keflex Mfg. Div.

412 Stainless Tubing for Expansion Problems

Four page bulletin AX-97 describes Anaconda A-X tubing, a lightweight stainless steel tubing for expansion problems that handles axial, radial, dual radial and shear movement while conveying large volumes of liquids or gases. Outline draw-

ings, specifications and typical assemblies shown. —Anaconda Metal Hose Div., Anaconda American Brass Co.

413 Steam Heating Specialties

Brochure 1501A contains detailed technical information on complete line of steam heating specialties, which includes radiator valves; float and thermostatic, high pressure thermostatic, inverted bucket, and return traps; strainers; air line valves; and gages.—Dunham-Bush, Inc.

414 Steam Trap

Class TM trap of double bellows design permits modulated operation instead of cycling on-off, low maintenance, unusually large capacity, three design series, no change in orifice 0 — 150 psi, nonfreezing. Trap remains open only to the degree of condensate and air in and ahead of trap; positively closes on presence of latent heat.—The C. E. Squires Co.

415 Steam Trap Book

Forty-eight page steam trap manual and catalog includes complete data on open float and thermostatic traps for preheat and reheat coils, converters, etc., standard steam traps for all pressures, pipe strainers to 6 in. in steel and high tensile iron. Contains data on trap selection, installation, testing, maintenance.—Armstrong Machine Works.

416 Steam Traps

Bulletin 257B covers the "Thermo-Dynamic" steam trap which automatically evacuates condensation and air from the system. Available for all steam pressures from 10 to 600 psi. Unit functions without leakage or loss of steam through bleeder ducts or orifices and has a stainless steel disc seating member.—Sarco Co., Inc.

• *An index to these items classified according to manufacturers appears on page 2-64 of this Trade Literature Supplement to Heating, Piping & Air Conditioning.*

417 Steam Traps

"Sterlco" float and thermostatic traps and thermostatic radiator traps, both equipped with the "Sterlco" vacuum thermostat, described in bulletin 102-202. Construction enables traps, if damaged, to fail in closed position. Cold radiation indicates trap needs attention, reducing maintenance problems. All thermostatic elements external. Built for pressures to 100 psig. — Sterling, Inc.

418 Steam Traps

New bulletin describes "Yarway" impulse steam traps for such applications as average condensate loads, light loads and extra heavy loads. Gives advantages, capacities, materials of construction, weights, dimensions, prices, etc.—Yarnall-Waring Co.

419 Thermostatic Radiator Valves

Thermostatic radiator valves to provide individual room or area temperature control on two pipe steam or hot water systems described in "Thermotrol" bulletin 501. Completely self contained, no external power source. Ideal for modernizing and inexpensive control systems for new construction. Sizes are ½, ¾ and 1 in., in all body patterns. — Sterling, Inc.

420 Thermostatic Steam Traps

Bulletin describes Riggio bronze body, angle or straight through, ½ to 1 in. thermostatic steam traps and semi-steel body, angle or straight through, ½ to 2 in., for steam pressures from vacuum to 250 lb psi, temperature 450 F, without changing valves, seats. Bellows of phosphor bronze or stainless steel. — Frank D. Riggio Co., Inc.

421 Thermostatic Traps

Webster series 7 is a diaphragm type thermostatic trap designed for low pressure vapor and vacuum steam heating service. It is recommended for all types of radiators, drip points, steam-using equipment, and other applications within its pressure and capacity range. — Warren Webster & Co., Inc.

Pumps & Pumping Equipment

422 Centrifugal Pumps

Buffalo centrifugal pumps are designed to handle most liquids and slurries under a variety of conditions. Range of sizes and capacities in cast iron, steel, alloys and specialized coatings, including rubber lined.—Buffalo Forge Co., Buffalo Pumps Div.

423 Centrifugal and Turbine Type Pumps

Four page condensed bulletin illustrates and describes the Aurora centrifugal and "Apco" turbine type pumps, single and multiple stage, flexible and close coupled, horizontal and vertical. Includes description, features, typical applications, capacity and head range for each type of pump. Capacities

See pages 2-31 and 2-33 for convenient reply cards you should use to request copies of these bulletins.

1 to 9000 gpm and heads to 600 ft. — Aurora Pump Div., The New York Air Brake Co.

424 Circulator

Brochure describing No. 1000 circulator for forced hot water heating systems includes flow curves, weights, dimensions, and product description. Also includes information relative to other accessory products such as combination air eliminator and flow check, tank drain, diversion fittings, ASME relief valves, tempering valves, and feedwater pressure regulators. — Watts Regulator Co.

425 Close Coupled Pump

Bulletin 108 describes a complete line of close coupled pumps with mechanical seals for applications in air conditioning, heating, booster systems and general industrial use. Capacities up to 550 gpm, discharge head up to 275 ft. Ten sizes with threaded and flanged connections.—Chicago Pump Co.

426 Condensation Pump and Receiver

Bulletin 250 F describes unit engineered specifically for returning condensate in heating systems, with ratings up to 75,000 EDR and 80 psi discharge pressure. Each pump is designed with large area at eye of impeller and pump will not steam bind.—Chicago Pump Co.

427 Condensation Pump and Receiver

Skidmore VC condensation pump and receiver described in bulletin 10-B. Used for returning condensate to boiler or other points from all types of steam heating or process equipment. Designed for rugged and dependable service, yet simple in construction to assure ease of accessibility. Complete engineering data and dimension table included. — Skidmore Corp.

428 Condensation Pumps

Bulletin 1403A describes new line of redesigned condensation pumps for use in low and medium pressure heating systems and steam process equipment. For consulting engineers, architects, plant engineers, and others. Schematic cycle of operation included.—Dunham-Bush, Inc.

429 Condensation Pumps

Economically designed for maximum efficiency with lower operating cost, Skidmore type HS pump is described in bulletin 14-B. Operates at wide range of pressures, including high temperature in condensation pump service. Pump has low receiver inlet. Bronze fitted throughout with impeller of bronze construction, keyed and locked on stainless steel shaft. — Skidmore Corp.

430 Condensation Pumps

The 4100-4200 series condensation pumps for low pressure systems up to 15,000 sq ft EDR are described in bulletin 700. Efficient, non-overloading centrifugal pumps for quiet operation. Three basic tank sizes for close adjustment to boiler water level. Steel or cast iron receivers. Built in simplex or duplex models with several different control systems. — Sterling, Inc.

431 Cooling Tower Pumps

Eight page design manual, bulletin CT-360, gives complete sizing and selection procedures and data for cooling tower pumps and piping.—Bell & Gossett Co.

432 End Suction Centrifugal Pumps

Bulletin 500 describes Weinman single stage end suction pumps having a virtually unlimited application and providing economical, efficient pumping performance to meet a great variety of pumping requirements. Compact and easy to maintain, they are available in 32 models, capacities from 10 to 2000 gpm. — Weinman Pump Mfg. Co.

433 End Suction Pumps

Catalog B-2300 describes complete line of "Fluidyne" end suction pumps from 1/4 hp "face mount" type to 150 hp close coupled type. Line features complete hydraulic and mechanical coverage for all end suction pump needs, with "off-the-shelf" service on most sizes.—Peerless Pump, Hydrodynamics Div.

434 General Service Pumps

Bulletin 100 covers Weinman type AC "Unipumps" designed to deliver efficient pressure boosting service, hot and chilled water circulation and to meet many other general purpose pumping requirements. "Unipumps" are available in 21 different models with output ratings from 10 to 260 gpm. — Weinman Pump Mfg. Co.

435 Horizontally Split Case Pump

Bulletin 98-A describes low cost, horizontally split case pump with mechanical seals featuring bronze impeller dynamically and hydraulically balanced for application in air conditioning, pneumatic water systems and heating and booster service. Short span between bearings eliminates shaft deflection. Capacities to 750 gpm, discharge heads to 150 ft. —Chicago Pump Co.

436 Motor Application Guide

Sixteen page application guide bulletin 270B outlines electric motors ranging in size from 1/20 to 400 hp. Includes polyphase, single phase and direct current motors. Factors to consider in motor selection are discussed along with numerous motor selection charts.—Century Electric Co.

437 Motors

Howell condensed full-line catalog FL-2 contains photographs, application and performance infor-

mation, electrical and mechanical types available, enclosures for single and polyphase a-c motors in size range 1/6 through 300 hp. — Howell Electric Motors Co.

438 Proportioning Pumps

Bulletin describes advantages of "Baco" proportioning pumps and chemical feed units and includes tabulations of capacity and pressure vs. motor horsepower. Pumps are high pressure, low capacity, reciprocating plunger types designed for application where a controlled capacity of fluid is required.—The Bird-Archer Co.

439 Pump Condensed Application Guide

Application guide APB 100.17A is designed to aid in tentative selection of pump type and capacity as a preliminary to calling in engineer for specific information on dimensions, ratings and specifications. Briefly covers Fairbanks-Morse line of pumps to meet practically every pumping requirement. — Fairbanks, Morse & Co.

440 Pump Valve Units

Eight page bulletin describes valve units designed to fit any reciprocating pump, old or new, and includes illustrations and descriptions of the component parts, pressure-temperature ratings, and a table of seat sizes and dimensions. Made in 17 sizes, these units meet over 300 variations in installation requirements.—Durabla Mfg. Co.

441 Screenless Sewage Ejector

Bulletin C-900H describes heavy duty submerged type screenless sewage ejectors that feature non-clog impeller and can be used for pumping hot and cold waste; draining boiler and elevator pits, handling boiler blow-off; sewage lift stations; disposing of drainage from underpasses, grade separations, subways and tunnels; and pumping large solids and stringy waste.—Weil Pump Co.

442 Sewage Pumps

Bulletin SE-860 E covers submersible, heavy duty screenless raw sewage pumps with non-clog impeller used for sewage lift stations, waste from buildings, heavy duty sump pump service. Features sealed motor that cannot be damaged by dust, dirt, water. Operates completely submerged, eliminates outside pump house.—Weil Pump Co.

443 Solid Shaft Motors

Bulletin MU-249 describes vertical solid shaft motors in ratings from 1 hp with nominal full load speeds of 3500, 1750, 1160 or 870 rpm. These NEMA "P" base motors are designed especially for pump, mixer, agitator and other applications requiring normal thrust vertically mounted motor.—Wagner Electric Corp.

444 Split Case Centrifugal Pumps

Bulletin 1200 describes Weinman type L single stage split case centrifugal pumps for high, medium or low head requirements. Ideal for municipal, public building and industrial use; chilled water or condensate circulation and liquid handling in paper mills, chemical plants, distilleries, refineries. Thirteen models with outputs 100 to 600 gpm are available.—Weinman Pump Mfg. Co.

445 Split Case Pumps

Bulletin B-2100 describes horizontally split case "Aqua-Line" pumps designed especially for the building trades which feature options in mechanical seal or packing type. Simplicity and quality of design and construction make their application, installation and maintenance easier.—Peerless Pump, Hydrodynamics Div.

446 Turbine Type Pumps

New 8 page bulletin illustrates and describes the latest design features of the "Apco" turbine type pumps. Also included are exploded views, selection tables, limitation charts, dimensions, construction specifications, and detailed engineering-architect specifications. Capacities range up to 150 gpm, pressures to 300 psi, and temperatures to 275 F. — Aurora Pump Div., The New York Air Brake Co.

447 Vertical Centrifugal Pump

Bulletin VKY-6900 describes a space saving, vertical design centrifugal pump that is all ball bearing, floor mounted, flexible coupled, and has mechanical shaft seal. Applications include hot and cold water circulating, water supply booster service, condenser water circulating for air conditioning.—Weil Pump Co.

448 Vertical Condensation Pumps

Bulletin 21-C describes new Skidmore vertical CCVS condensate pump. Description, sectional view, engineering data, dimensions. Features close-coupled design, capacity range 500 to 10,000 ft EDR, discharge pressure from 20 to 40 lb. Three new single units available; duplex units furnished with either two float switches or automatic alternator. — Skidmore Corp.

449 Vertical Turbine Pumps

Bulletin 14 describes the types, construction, and applications of "FloWay" vertical turbine pumps, designed in several models for a broad range of industrial usage and which have a record of proven performance in pumping every fluid, corrosive or non-corrosive, hot or cold, volatile or non-volatile. Capacities of these vertical turbine pumps range up to 4000 gpm.—Fiese & Firstenberger Mfg., Inc.

Radiation, Surface & Coils

450 Brass and Copper Tube and Pipe

Catalog is useful guide for heating, refrigeration, air conditioning, plumbing and architectural specifications and contains detailed data on copper water tube, drainage tube, commercial brass and copper tube, copper refrigeration tube, integral finned tube and precision small gage seamless tube. Included is red brass, copper and threadless pipe.—Reading Tube Co.

451 Cast Iron Baseboard Moulding and Seal

Bulletin C-292 describes "Trim-Seal", a heat-proof extruded neoprene moulding for cast iron baseboards which has the appearance of and replaces cove moulding. Installation procedure illustrated.—Weil-McLain Co.

452 Cast Iron Radiant Baseboards

Nos. 7 and 9 "Base-Ray" cast iron radiant baseboards are now available. IBR rated. No. 7 is 7 in. high, IBR rating 2.35 sq ft per lineal ft. No. 9 is 9⅞ in. high, IBR rating 3.4 sq ft per lineal ft.—Burnham Corp., Heating & Cooling Div.

453 Central Air Conditioning

Engineering catalog with illustrative and descriptive information and complete selection data on central plant conditioners, multizone conditioners, sprayed coil units, heating-ventilating units, cooling and heating coils. This catalog is notebook type and is index tabbed for easy and quick use. — Thermal Engineering Corp.

454 Convector

Webster "Walvector," with excellent style, beauty and performance, is an elongated finned tube convector consisting of highly efficient heating surface and heavy gauge sheet metal enclosure designed for mounting along wall, close to floor line or under windows. Applicable to new construction, modernization. — Warren Webster & Co., Inc.

455 Convector Radiators

Catalog 4059, 32 pages, illustrates and fully describes how modern design and engineered heating efficiency combine to make Young convector radiators ideal for steam or hot water heating systems. Technical data, general application photos, construction features, steam and hot water capacities, dimensional data and engineering specifications are included. — Young Radiator Co.

456 Convertors

New 12 page bulletin 50-1 describes the "Paracoil" series K line of steam-to-water convertors and gives capacity table from 0 to 15 psig steam. Units are for application in commercial, domestic and industrial systems employing forced circulation of hot liquids at low and high temperature. —Davis Engineering Div., Tube Reducing Corp.

457 Cooling Coils and Their Selection

Well illustrated bulletin 11 contains complete information on Marlo cooling coils, including "Sicromatic" charts and rule permitting direct graphical coil selection in seconds. One chart provides all data for a particular application, including proper refrigerant or chilled water temperatures.—Marlo Coil Co.

458 Direct Expansion Coils

Catalog 405 describes all applicable sizes and models of type X direct expansion coils engineered and designed to deliver maximum heat transfer efficiency under all operating conditions. Included is informative data on coil selection, specifications, applications and dimensions.—McQuay Inc.

459 Fin Radiation

Four page bulletin on individual and strip fin tubing, cooling and heating coils. Information is given on features of individual fin tubing, strip fin tubing, special shapes, and G & O heating units — single pass header to header type, and continuous return-bend coils.—The G & O Mfg. Co.

460 Finned Surface Coils

Literature describes "H&M Turbu-Flo" finned coils for cooling or heating and for use with refrigerant, chilled or hot water, or steam (both standard and non-freeze types). — Halstead & Mitchell Co.

461 Finned Tube Radiation

Simplified design of finned tube radiation speeds installation so one man can install it. Variety of lengths eliminates need for cutting enclosures on job. Enclosures available in several heights to accommodate one, two or three tiers of 3 and 4 in. finned heating elements. Sloping and flat top models.—Modine Mfg. Co.

462 Heating and Cooling Coils

Bulletin HC-2 gives descriptive information about complete line of heating and cooling coils. Direct expansion, cold water, hot water, standard steam, non-freeze steam and booster coils are all described as to construction, dimensions, and basic capacities. — Bohn Aluminum & Brass Corp., Danville Div.

463 Hydronic Heating

Hydronic heating ratings, data, and dimensions catalog provides pertinent information on design and construction details of hydronic heating equipment for residential and commercial application. Equipment includes gas fired and oil fired cast iron boilers and conversion burners; nonferrous and cast iron baseboard heating panels and wall mounted convectors; cast iron radiators.—American Radiator and Standard Sanitary Corp., Plumbing and Heating Div.

464 Pipe Coils and Fin Coils

Engineering data book on pipe coils and fin coils prepared especially for design engineers. This 48 page publication is a guide in the design of coils, with specific data on dimensional limitations, coil development formulas, and heat transfer factors. Numerous reference and design tables are included. — Rempe Co.

465 Radiant Heating and Cooling

"The Story of the Burgess-Manning Ceiling" for radiant panel heating and cooling, and acoustical control is given.—Burgess-Manning Co.

• *Your comments on this Trade Literature Supplement to Heating, Piping & Air Conditioning are Invited. See page 2-86.*

466 Three Way Functional Ceiling

Completely self-contained suspended ceiling offering radiant panel heating, radiant panel cooling and acoustic control is described.—Burgess-Manning Co.

467 Unit and Blast Heaters

Revised catalog GP 956-R4-1-60 describes "Grid" cast iron steam heat transfer surface unit heaters (both horizontal and down blow), blast heaters and radiators, and discusses corrosion in unit heaters. Describes and illustrates one piece construction high test iron heating sections, together with air distribution charts, heating capacities, conversion tables, etc.—D. J. Murray Mfg. Co.

468 Valves, Traps and Piping

Technical sales bulletin 12 contains technical information on the installation and enclosure of automatic and manual control valves, traps, and piping arrangement for 3 in. thin Shaw "PanelVectors." — Shaw-Perkins Mfg. Co.

469 Water Coils

Catalog 53C8a covers water coils designed, rated and manufactured to the highest standards in a wide variety of sizes. Featured is a comprehensive rating chart for easy coil selection.—Recold Corp.

470 Water and Refrigerant Coils

Catalog 5559 contains a full description of a complete line of water and direct expansion refrigerant coils. The catalog describes exclusive construction features, with physical and performance data. Piping diagrams, architectural and engineering specifications, and many illustrations are included. — Young Radiator Co.

Refrigeration Equipment for Air Conditioning

471 Absorption Refrigeration Unit

Catalog DS-435 covers Trane absorption "Cold Generator", completely hermetic, packaged absorption refrigeration machine. Of a unique, compact, single shell design, it uses low pressure steam as the primary energy source and produces chilled water for comfort air conditioning and process applications.—The Trane Co.

472 Absorption Water Chilling Systems

York absorption water chilling systems are heat operated automatic refrigerating units which use low pressure steam or high temperature water as the activating medium, plain tap water as the refrigerant and lithium bromide (a simple salt) as the absorbent. The systems are available from 100 to 740 tons capacity.—York Div. of Borg-Warner Corp.

473 Air Cooled Air Conditioning Units

Sixteen page catalog 635 describes type AL "Aircon" dual purpose air cooled condenser, exhaust, and/or heating and ventilating equipment. Units provide flexibility by combining refrigerant condensing with heating and ventilating. Catalog covers applications, direct selection, control and physical data, and engineering specifications.—McQuay Inc.

474 Air Cooled Condensers

Bulletin AC-102 gives complete performance data, dimensions, and description on "H&M" air cooled condensers. There are four types covered in bulletin: horizontal air flow, vertical air flow, centrifugal fan, and residential type.—Halstead & Mitchell Co.

475 Air Cooled Condensers

Catalog 34C9a describes the specifications and features of "Dricon" air cooled condensers for either vertical or horizontal air flow available with multiple circuiting and "Wintermatic" head pressure control. Quiet, belt driven fans and balanced circuiting for maximum efficiency are featured.—Recold Corp.

476 Air Cooled Refrigerant Condensers

Six page bulletin DC-60 on series B "DriCooler" air cooled refrigerant condensers, with capacities tabulated, specifications given, and features described and illustrated. Damper control system for sub-season service and precooler also described.—The Marley Co.

477 Brass and Copper Tube and Pipe

Catalog is useful guide for heating, refrigeration, air conditioning, plumbing and architectural specifications and contains detailed data on copper water tube, drainage tube, commercial brass and copper tube, copper refrigeration tube, integral finned tube and precision small gage seamless tube. Included is red brass, copper and threadless pipe.—Reading Tube Co.

478 Centrifugal Water Chillers

Eight page, two color illustrated booklet lists centrifugal water chillers, air handling equipment, central station all-in-one air conditioners, packaged liquid chillers, radial design compressors and condensing units, cooling and heating units, and fan coil units. Booklet contains list of features and specifications.—Airtemp Div., Chrysler Corp.

479 Certification of Air Conditioners

Booklet entitled "A New Assurance" describes the ARI program for the certification of unitary air conditioners in accordance with ARI standards. More than 90 percent of all producers of this type of equipment now are signed up in the program.—Air-Conditioning & Refrigeration Institute.

480 Compound Air Source Heat Pump

The York compound air source heat pump is designed to provide both hot and cold water for use in air conditioning systems and consists of two basic units — the compressor unit and the outdoor air unit. Available in capacities from 50 to 150 tons and in multiples.—York Div. of Borg-Warner Corp.

481 Condensing Unit

Product release points up special features of new 17 ton air cooled condensing unit which includes a new refrigerant circuiting method that cools the liquid refrigerant up to 20 deg below the condensing temperature. Air mover is a 4 ft diameter "Power Prop" which delivers air in a straight through pattern.—Lennox Industries Inc.

482 Cooling Towers

New 28 page bulletin 207 covers complete line of fireproof cooling towers from 10 to 700 tons in single, factory-assembled units. Engineering drawings, capacity and performance data, selection tables, and description are given for blow-through, draw-through, centrifugal fan, and tubeaxial fan models. — Baltimore Aircoil Co., Inc.

483 Cooling Towers

Bulletin WT-501 covers hot dipped galvanized gravity flow mechanical draft cooling towers with removable plastic decking furnished in 10 frame sizes from 5 to 60 tons.—Binks Mfg. Co., Cooling Equipment Div.

484 Cooling Towers

Fluor cooling towers for central station air conditioning and refrigeration service that meet optimum architectural operating and performance requirements are described in catalog.—Fluor Products Co.

485 Cooling Towers

Bulletin describes "H&M" induced draft cooling towers with propeller fans (2 to 150 tons) for outside installation and centrifugal fan (5 to 30 tons) for indoor installation or use with ductwork. Take-apart models also available. — Halstead & Mitchell Co.

486 Cooling Towers

Bulletin covers complete line of Havens "Performance Proved" cooling towers, all featuring hot-dipped galvanizing after fabrication. Lists standard features and accessory items. Gives dimensional data, performance data, material and construction specifications. — Havens Cooling Towers.

487 Cooling Towers

Four page bulletin DFA15-60 on series 15 "Double-Flow Aquatowers," designed to provide increased capacities for air conditioning and industrial applications at less cost per gpm cooled. Features include use of laminated woods, sloping louver walls and broad louvers, glass reinforced polyester grid fill supports, flow control valves, external lube lines.—The Marley Co.

488 Cooling Towers

Four page bulletin PT-60 of performance data, dimensions, and specifications for "Permatowers," designed especially for areas and applications where corrosion is a major problem but applicable to all types of installations. Inert materials utilized in casing, fan cylinder, basin and filling.—The Marley Co.

489 Cooling Towers

Catalog 32C9a gives complete selection data and information on "Dri-Fan" cooling towers which in-

corporate patented "Corner Construction" for accessibility, water seal access doors and exclusive "Bleed Funnel" to reduce mineral deposits.—Recold Corp.

490 Evaporative Condenser Engineering Manual

Fourteen page bulletin 141 covers theory, construction, selection, installation, ducting, refrigeration piping and capacity control of evaporative condensers. Schematic drawings illustrate evaporative condenser operation along with psychrometric and entropy diagrams. Selection diagrams are given for refrigerants 12 and 22 and ammonia under both dry and wet operation. Pipe sizing tables included.—Baltimore Aircoil Co., Inc.

491 Evaporative Condensers

Catalog 91-311 provides full details on Acme "Flow Mizer" evaporative condensers for air conditioning and refrigeration systems using F-12, F-22 or ammonia refrigerants. Eleven models with capacities to 200 tons described, with application and dimension data, features, capacities and engineering specifications.—Acme Industries, Inc.

492 Evaporative Condensers

New 24 page bulletin 107 covers complete line of evaporative condensers from 10 to 700 tons in single, factory-assembled units. Engineering drawings, capacity and performance data, selection tables, and description are given for blow-through, draw-through, centrifugal fan, and tubeaxial-fan models. — Baltimore Aircoil Co., Inc.

493 Evaporative Condensers

Full line of Vilter evaporative condensers detailed. Twelve page bulletin includes construction features of both VXF and VSC types with data and dimensions, performance charts and typical installation photographs. Condensers are available for refrigerants 12, 22 and ammonia and are offered in capacities of from 30 through 360 nominal tons. — The Vilter Mfg. Co.

494 Expanded Polystyrene Insulation

Eight page brochure, which discusses "Uni-Crest", United Cork Companies' expanded polystyrene insulating material, describes the product, lists its physical properties, gives standard dimensions, and recommends thicknesses for a wide range of temperature conditions. Photos and drawings illustrate various uses and the text discusses simplified techniques of installation and finishing. — Uni-Crest Div., United Cork Companies.

495 Fishing Boat Refrigeration

A simplified method of chilling fish in the holds of boats and in storage tanks of processing plants is described in the "Frick System" for May 1960. Refrigerated sea water sprayed over the load results in distinct savings in quality and cost. It is presently being used by two dozen fishing boats and several land plants.—Frick Co.

496 Heat Pumps

More than 175 units are listed on "Galaxy" reference chart. Included are 136 air conditioning products and 49 gas and oil fired furnaces. Divided into three parts (unitary air conditioners, heat pumps, furnaces), chart gives series designation and specifications. Designed for easy reference in determining right unit for a particular job. — Typhoon Air Conditioning Div., Hupp Corp.

497 Humidity Control Summer Air Conditioner

Type 925 Mueller "Climatrol" humidity control summer air conditioner not only cools but brings humidity down to comfortable level, regardless of the outside temperature. Unit provides three-way operation: cooling, 2 hp operation; cooling with 4 hp; and dehumidification only. — Mueller Climatrol Div. of Worthington Corp.

498 Ice Accumulator Units

Engineering catalog BAE describes "Ice-Cel" ice accumulator units used wherever the air conditioning load is high for a relatively short period of time, such as in churches, mortuaries, auditoriums, lodge halls, cafeterias, offices, theaters, motels, retail stores, and similar applications.—Dole Refrigerating Co.

499 Ice Maker

Bulletin 54 describes crystal clear, sparkling "Shell-Ice," which is frozen on the outside of stainless steel tubes and harvested automatically. Ice is solid, long lasting, and can be used extensively in cooling beverages and foods being processed, shipped or served.—Frick Co.

500 Induced Draft Cooling Towers

Catalog 22L-14 covers important design features built into large capacity, all steel induced draft cooling towers, using lightweight, plastic fortified pure cellulose fill. Includes complete engineering, dimensional and loading data, along with full operating range selection curves. Capacities range from 150 to 700 tons in a single cell.—Carrier Air Conditioning Co.

501 Packaged Liquid Chillers

Four page bulletin RS2E describes air or water cooled air conditioning units, and packaged liquid chillers. Includes photos and specifications. — Curtis Mfg. Co.

502 Packaged Water Chiller

Eight page catalog 91-515 describes Acme's compact, lightweight, ready-to-install "Flow Cold" packaged water chiller line in nine models, 3 through 30 ton capacities. Included is complete information on construction details, general and engineering specifications, capacity data and features of these water chillers.—Acme Industries, Inc.

503 Poultry Chiller

Bulletin 420 describes the "Counter-Flow-Continuous" ("C-F-C") poultry chiller, which cools up to 75 birds per minute in a stainless steel flume through which they are conveyed in the opposite direction from the stream of clear, refrigerated water, which is used only once.—Frick Co.

504 Radial Compressors

Forty page, two color illustrated pamphlet describes Chrysler Airtemp's radial compressors, and gives capacity and condenser ratings and applications.—Airtemp Div., Chrysler Corp.

505 Reciprocating Compressors

Complete information on Vilter VMC reciprocating type refrigerants 12 and 22 compressors is given. Offered in capacities of from 20 hp through 200 hp, these high speed 2, 4, 6, 8, 12 and 16 cylinder machines are described in a 12 page bulletin. Construction features, dimensional data, application possibilities are included. — The Vilter Mfg. Co.

506 Refrigerant Filter-Driers

Bulletin V-87 covers "Dri-Cor" refrigerant filter-drier for removing moisture, moisture created acids, other objectionable matter. Multiple cartridge and sealed types. Features molded core plus granular desiccant for balanced two-stage drying and progressive filtration. Capacity 1 to 165 tons. Connections $\frac{1}{4}$ in. flare to $2\frac{1}{8}$ in. OD solder.—Henry Valve Co.

507 Refrigerant Sealer

Refrigerant sealer for tubes and liner entries is described and illustrated. Unretouched photos compare "Wat-R-Bar" with conventional sealing compounds in 45,000 high frequency freeze-thaw cycling test. Reveals new sealant's long resistance to vapor and temperature extremes.—Presstite Div., American-Marietta Co.

508 Refrigerant Thermodynamic Tables

Three 36 page tables of thermodynamic data on "Genetron" refrigerants 11, 12 and 22. Includes new thermal data based on spectroscopic measurements; also pressure-enthalpy diagrams on 11, 12, and 22.—General Chemical Div., Allied Chemical Corp.

509 Refrigerants

Four page brochure gives vapor pressures, selected physical data for "Genetron Super-Dry" refrigerants.—General Chemical Div., Allied Chemical Corp.

510 Refrigerated Purging

Twelve page guide tells how air in a refrigerating system affects efficiency; how to tell if purging is needed; comparison of manual and automatic refrigerated purging. Operation of refrigerated purger explained. Location of purge connections is discussed, as well as installation and operation. Two pages of comments by purger users. — Armstrong Machine Works.

511 Refrigeration Instruments and Valves

Catalog 76-R shows entire line of refrigeration gauges and thermometers, as well as regulating valves and solenoid valves. — Marsh Instrument Co., Div. of Colorado Oil and Gas Corp.

512 Thermostatic Expansion Valves and Controls

Catalog contains installation, application, tabular and descriptive information for sizing and selecting thermostatic expansion valves, refrigerant distributors, solenoid valves, suction line regulators, hot gas bypass valves, float switches, high side float valves, evaporator controls and reversing valves for all refrigerants and all types of applications.—Alco Valve Co.

513 Tube and Pipe

Catalog gives helpful information on the efficient and economical installation of Revere copper water tube, DWV copper tube, "Dryseal" copper tube, red brass and copper pipe.—Revere Copper and Brass Inc.

• *See the front cover of this Trade Literature Supplement to Heating, Piping & Air Conditioning for the index by products to these listings.*

Three readers who sent in the reply cards from the June Trade Literature Supplement to Heating, Piping & Air Conditioning neglected to show their names and addresses on the cards. We are thus unable to refer their requests for literature to the manufacturers. Such cards came to us from Washington, D.C.; Chicago; and Hickory, N.C. And one card (from Hollywood, Fla.) not only had no name on it but no numbers were circled, either.

Sound & Vibration Control

514 Acoustical Panels

Bulletin 47 illustrates and describes Diamond perforated metal lay-in panels for modern acoustical ceilings and shows typical installations. All Diamond acoustical panels meet Federal specifications for incombustibility and have a glare-free baked-on finish which is easily washed and is not affected by moisture or any probable change in temperature. — Diamond Mfg. Co.

515 Aluminum Roof Curb

Bulletin SCE-89 describes self-flashing extruded aluminum "Sonotrol" roof curb. Easily installed, it provides a structurally stable support for the roof exhauster or motor or gravity operated dampers. This device helps to reduce sound build-up developed by roof fans. Installation instructions, drawings, specifications. — Penn Ventilator Co., Inc.

516 Damping Compound

Bulletin K17C covers "Vibrodamper", a new viscoelastic material which reduces structurally borne noise and vibration. Provides vibration decay rate of 35-55 db, is resistant to alkali, grease, gasoline and aliphatic oils, is unaffected by ozone or sunlight, and dries to smooth, attractive finish. Nontoxic and nonflammable.—The Korfund Co. Inc.

517 Duct Silencers

Bulletin covers "Quiet-Duct" silencers of several lengths and sizes to meet any cfm standard and noise reduction requirement. All silencers tested and rated acoustically and for pressure drop by acknowledged test methods.—Industrial Acoustics Co., Inc.

518 Flexible Struts and Vibration Snubbers

Catalog 229 covers Barco "Ball Type" flexible struts for supporting pipe subject to thermal expansion or contraction, and "Vibrasnub" hydraulic vibration snubbers to eliminate rapid shock or vibration loads in piping or other structures. Includes information on design and installation, how they work, and presents illustrative problems. —Barco Mfg. Co.

519 Guide to Vibration Control Specifications

Six page bulletin F2D gives information on how to write vibration isolation specifications for air conditioning and related equipment. It contains a definitive treatment of the factors involved in the selection of various isolation media commercially available and has a selector chart designed to simplify writing specifications.—The Korfund Co.

520 Hangers for Piping, Equipment

High deflection "Vibro-Hangers" eliminate vibration and noise from suspended equipment and piping by utilizing a helical steel spring as the vibration isolating medium. The springs will withstand high temperatures without permanent set, and low temperatures without losing their resilience.—The Korfund Co.

521 Low Frequency Duct Silencer

Bulletin describes "Uni-Resonator" low frequency duct silencer.—Elof Hansson, Inc.

522 Package Silencers

New bulletin on standardized package "Conic-Flow" silencers for controlling fan noise in air handling systems. Made in 18 diameters from 12 to 60 in. for both low and high pressure systems, all silencers are tested and rated acoustically and for pressure drop by acknowledged test methods. —Industrial Acoustics Co., Inc.

523 Prefabricated Duct Silencers

Eight page catalog 160 on "Uni-Silencer" prefabricated duct silencers that are guaranteed and bonded. Manufacturing information, acoustical information, pressure drop tables, pressure drop and air flow data, and acoustical performance are included. — Elof Hansson, Inc.

524 Roof Ventilator Silencer

Bulletin describes E H roof ventilator silencer.—Elof Hansson, Inc.

525 Rubber Expansion Joints

Catalog XJ covers rubber expansion joints — right angle, tapered and offset; single and multiple arch and sleeve types. Rubber vibration and sound absorber units are also covered.—Goodall Rubber Co.

526 Silencers

New bulletin describes "Mod-U-Size" silencers, which may be grouped together on job site to suit any requirement and offer guaranteed silencing with savings up to 25 percent. Made in standard and low pressure models in five sizes. All silencers tested and rated acoustically and for pressure drop by acknowledged test methods.—Industrial Acoustics Co., Inc.

• *Be sure to type or print your name and address clearly when you request copies of these catalogs and bulletins.*

527 Sound Absorbers

Sound absorbers for high velocity system fan noise attenuation designed for low static pressure loss. They have minimum cross sectional area for use in crowded equipment rooms. Sound attenuation ratings based on actual tests.—United Sheet Metal Co., Inc.

528 Sound Control Curb

"QT" sound control curb is new Jenn-Air prefabricated, self-flashing unit designed to replace conventional power exhauster curbs, and described in bulletin 60-SC. Reduces exhauster sound power at inlet 90 percent, decreases air moving efficiency only 10 percent. Noise suppression equivalent to 18 ft of lined duct 14 in. square. — Jenn-Air Products Co., Inc.

529 Sound Level Meter and Analyzer

Four page bulletin 0808-1 describes "M-S-A Soundscope" for the direct measurement and analysis of noise, with information on construction features and operation. For industrial hygienists, acoustical engineers, safety engineers, product designers, and others.—Mine Safety Appliances Co.

530 Sound Trap Selection

Twenty-four page selection manual on "Aircoustat" sound traps describes them and gives selection, installation and ordering information.—Koppers Co., Inc., Metal Products Div.

531 Sound Traps

Four page folder describes "Aircoustat" sound traps for use in silencing fan noises in air handling systems.—Koppers Co., Inc., Metal Products Div.

532 Stainless Steel Bellows

Comprehensive catalog which includes application and engineering data on laminated stainless steel bellows. Included is data on expansion compensators, expansion joints, vibration absorbers, flexible connectors and pipe guides.—The U. S. Flexible Metallic Tubing Co., Keflex Mfg. Div.

533 Vibration Controls for Air Conditioning

Four page bulletin VAC-12 illustrates and describes 18 standard types of noise and vibration controls for air conditioning equipment. Complete write-up gives background information on vibration control as applied to air conditioning applications. Selection guide included.—Vibration Mountings, Inc.

534 Vibration Eliminators

Bulletin VE-313 contains engineering data and construction details on Anaconda vibration eliminators for absorbing vibration and dampening noise in tubing of air conditioning and refrigeration systems. Installations are shown and advantages are listed.—Anaconda Metal Hose Div., Anaconda American Brass Co.

Tools & Machines

535 Automatic Contour Cutter

Four page, two color brochure describes function of contour cutter that makes straight, mitered, and contoured cuts through pipe, without cams, templates or layouts. Contains illustration of machine in operation, operating instructions, cost comparison chart, and pertinent specifications.—Steffan Mfg. Corp.

536 Bevel Land Grinder

The H. & M. bevel land grinder uses an electric or air powered grinder to smooth pipe cuts and place the land on bevels. Leads to easier, faster, more positive alignment of pipe and to better quality welds. Available in two models, one for 6 to 12 in. pipe, the other for 14 to 30 in. pipe.—H. & M. Pipe Cutting & Beveling Machine Co.

537 Diamond Drilling Equipment, Bits

Bulletin 321 describes diamond drills and bits designed for rapid drilling in reinforced concrete, brick, tile, stone and other hard or brittle materials. Shown are features and applications of two drilling units; diamond bits from 1/4 to 16 in. in diameter are illustrated and described. Accessory equipment is covered.—E. J. Longyear Co.

538 Elevating Platform

Brochure on new "Sky Witch" work-load lift, a portable hydraulic elevating platform that puts load and workmen at correct job height. Six models are available, each with options on power, mounting and accessory equipment.—Charles Machine Works, Inc.

539 Hammer-In Fastening Tools

Six page catalog, B-145, illustrates complete line of tools and fasteners including "Shure-Set" light duty fastening tool which operates on "needle-in-a-coin" principle, requires no cartridge, makes every hammer blow more effective, and sets drive pins and threaded studs in concrete, masonry and building block.—Ramset Fastening System, Winchester-Western Div., Olin Mathieson Chemical Corp.

540 Hand Cutter

Catalog page gives information on model HC-100 mechanized hand cutter for cutting flat or tubular steel plate. Illustration of machine in action and several diagrams show various operations possible and how they are accomplished. Complete specifications and cutting guide.—Steffan Mfg. Corp.

541 Mechanical Hole Cutter

Two page, two color broadside illustrates and describes companion piece of equipment to the Steffan automatic contour cutter. Cuts holes (perpendicular or angular) in pipe or cylinders, circles and ellipses in flat plate, without cams or templates.—Steffan Mfg. Corp.

542 Pipe Cutting and Beveling Machine

Model O machine for cutting and beveling 1½ to 4 in. pipe features fast, easy mounting and employs same split gear horseshoe principle which characterizes all other H. & M. machines. Design enables operator to place machine on continuous pieces of pipe. Completely portable, can be moved from job to job, shop to field.—H. & M. Pipe Cutting & Beveling Machine Co.

543 Pipe Cutting and Beveling Machines

Seven H. & M. pipe cutting and beveling machines are available to prepare 1½ to 36 in. pipe for welding. The "Out-of-Round" accurately cuts irregularly shaped pipe. The "Shape Cutter" employs templets to cut various shapes for the fabrication of tees, ells, other designs.—H. & M. Pipe Cutting & Beveling Machine Co.

544 Pipe Fitters' Tools

New eight page illustrated bulletin E-240 describes tools for the pipe fitting trade. More than 60 Greenlee timesaving tools are covered in it, including lightweight hydraulic pipe benders, tubing benders, hydraulic pipe pushers, portable high pressure hydraulic power pumps, complete line of power bits, pipe bits, auger bits, chisels and allied tools.—Greenlee Tool Co.

545 Pipe Tools

New 24 page illustrated price list gives complete information and prices for all "Ridgid Work-Saver" hand and power tools such as wrenches, reamers, threaders, dies, pipe and tubing cutters, flaring tools, vises, power drives, threading machines, oilers, thread cutting oil and stands.—The Ridge Tool Co.

546 Pipe Tools

Pocket size 16 page reference guide "Finger-Tip Facts" with easy to use thumb index, handy hang-up hole, reminder and order memo sheet briefly describes all popular "Ridgid" pipe tools — wrenches, threaders, reamers, dies, pipe and tubing cutters, vises, power drives, flaring tools and threading machines.—The Ridge Tool Co.

547 Pipe Tools and Vises

Catalog covers quality tools, including pipe threaders, reamers, pipe and tubing cutters, and vises.—Reed Mfg. Co.

548 Portable Trenchers

Full-color brochure on "Ditch Witch", the Charles line of portable trenchers, gives specifications, photographs and information on machines covering a range of 3 to 16 in. trench widths and depths to 6 ft.—Charles Machine Works, Inc.

549 Powder Actuated Fastening Tools

Eight page catalog 829R describes line of Omark powder actuated tools, drive pins, couplings, special guards and accessories. "Drive-It" tools save time and money when fastening air conditioning or heating ductwork to concrete ceilings or steel beams. Special guards available for rapid fastening of ductwork suspended by sheet metal straps.—Omark Industries, Inc., Fastening Div.

550 Powder Actuated Fastening Tools

Application manual B-125 details fast, efficient Ramset method of anchoring pipe hangers used in suspending various types of piping to steel and concrete. Tools and drawings are included as are specifications on sprinkler and water systems, waste lines and others.—Ramset Fastening System, Winchester-Western Div., Olin Mathieson Chemical Corp.

551 Powder Actuated Fastening Tools

Twelve page catalog, B-141, illustrates full line of "Jobmaster" powder actuated fastening tools, drive pins, threaded studs and powder charges; gives diagrams, charts and application drawings which explain in easy-to-read terms operating principles, scope, versatility, speed and accuracy in fastening with powder actuated tools.—Ramset Fastening System, Winchester-Western Div., Olin Mathieson Chemical Corp.

552 Wood Boring and Cutting Tools

New six page bulletin H-308 contains detailed information on the most widely used tools in the Greenlee woodworking line of particular value to pipe fitters. Over 75 tools, including pipe bits, expansive bits, augers and car bits, power bits, solid center auger bits, chisels, gouges and screw drivers are described.—Greenlee Tool Co.

Advertisers in Heating, Piping & Air Conditioning have furnished these descriptions of their catalogs, bulletins, and other helpful data. Copies are available to readers on request.

Unitary Air Conditioning

553 Absorption Air Conditioning Unit

Illustrated sheet outlines advantages, operation, applications, performance data and specifications of recently introduced Arkla model 500C remotely installed absorption type 3½ ton (at present) chilled-hot water air conditioning unit.—Arkla Air Conditioning Corp.

554 Absorption Water Chiller

Illustrated sheet shows operation, performance data, cooling capacities and specifications of "Arkla-Servel" series 3000 steam actuated absorption water chillers.—Arkla Air Conditioning Corp.

555 Air Conditioning Control Systems

Twenty-four page, three color, illustrated brochure traces the development of Powers controls for air conditioning and other temperature systems in all types of modern buildings.—The Powers Regulator Co.

556 Air Conditioning Units

Four page bulletin RS2E describes air or water cooled air conditioning units, and packaged liquid chillers. Includes photos and specifications. — Curtis Mfg. Co.

557 Air Cooled Split System Equipment

Complete line of air cooled split system equipment ranging in capacities from 3 to 20 tons. — United States Air Conditioning Corp.

558 Air Handling Equipment

Catalog 382 describes and illustrates construction details and features, gives dimensions and capacity data, engineering specifications and optional accessories for Acme model AC central station air handling units. The line, with interchangeable components, offers 30 models, 15 sizes ranging from 665 to 19,200 cfm—Acme Industries, Inc.

559 Air Handling Equipment

Sectional constructed air handling units for cooling, heating, ventilating, humidifying, dehumidifying and filtering, either single or multiple zone. — United States Air Conditioning Corp.

560 Air Units

One page bulletin describes Rempe air units for any temperature from 38 to 300 deg; all humidities; reheat with steam, water or electrical elements as required. Available in sizes 2, 3, 5, 7½ and 15 tons. Units can be furnished with copper tube, steel hot galvanized, or stainless steel cooling coils. — Rempe Co.

561 Apartment Heating-Cooling Package

Product release announces new 2 ton heating-cooling package for apartments, small commercial applications. Equipment, including gas furnace, cooling coil and air cooled condensing unit, fits 36 x 36 in. closet. Air handling face of condenser can protrude through outside wall or intake and exhaust air for condenser may be handled through air shafts.—Lennox Industries Inc.

562 Central Station Air Conditioning

Sixty page catalog AC 100 includes complete engineering and application information on new "Kennard/Nelson" line of packaged central station air conditioning units. A unique double drain pan with 1 in. insulation between inner and outer pan has been built in. Capacity range is from 600 to 36,000 cfm.—American Air Filter Co., Inc.

563 Central Station Air Conditioning

Central station draw-through "Multitherm" air conditioning units, in both horizontal and vertical arrangements, are fully covered in 40 page catalog 1309. Capacity tables, selection guides, coil data, dimensions, and sample problems are included. Sprayed coil as well as general purpose "Multitherms" are described. — Clarage Fan Co.

564 Certification of Air Conditioning

Booklet entitled "A New Assurance" describes the ARI program for the certification of unitary air conditioners in accordance with ARI standards. More than 90 percent of all producers of this type of equipment now are signed up in the program.—Air-Conditioning & Refrigeration Institute.

565 Condensers and Condensing Units

Yuba-Aimco's "Fandaire" air cooled condensers and condensing units introduce new circular concept. Incorporate basic principles of good heat transfer design: tapered fin construction, vertical discharge of heated air, sloping tube drainage of condensate and oil, counterflow, low pressure drop, elimination of stress and strain due to temperature change.—Yuba Consolidated Industries, Inc.

566 Condensing Unit

Product release points up special features of new 17 ton air cooled condensing unit which includes a new refrigerant circuiting method that cools

the liquid refrigerant up to 20 deg below the condensing temperature. Air mover is a 4 ft diameter "Power Prop" which delivers air in a straight through pattern.—Lennox Industries Inc.

567 Direct Fired Water Chiller-Heater

Illustrated specifications sheet describes operation and features of Arkla's model DF-3000 25 ton direct fired gas absorption water chiller-heater. Gives cooling and heating capacities and dimensions.—Arkla Air Conditioning Corp.

568 Dual Purpose Air Handling Unit

Twenty-four page bulletin DD-5 describes large central station equipment for dual duct or multizone air conditioning systems complete with fans, filters, cooling and heating coils, automatic dampers, sprays, pumps, etc. — Buensod-Stacey, Inc.

569 Fan Coil Air Conditioning Units

Four page illustrated bulletin 38-216 describes features and the versatility of fan sections for 11 models of "Weathermaker" air conditioning units for residential and commercial applications in capacities from 3 to 44 tons. Nominal ratings and physical data included.—Carrier Air Conditioning Co.

570 Hydronic Air Conditioning Manual

American-Standard type 20 "Remotaire" application manual contains pertinent data for easy, accurate selection of vertical style, fan coil, year 'round hydronic air conditioning units. Contains complete design specifications, detailed dimensions, comprehensive selection procedure, tabulated and charted capacities, motor and electric characteristics, and control descriptions.—American Radiator and Standard Sanitary Corp., Plumbing and Heating Div.

571 Large Capacity Air Conditioning Units

Whether used singly or as part of a multiple unit air conditioning system, these larger capacity (7½ to 15 tons) Carrier "Weathermakers" are designed to meet the varied requirements of business and industry. Fully described in the 8 page catalog are features and ratings, as well as diagrams and dimensions.—Carrier Air Conditioning Co.

572 Packaged Air Conditioning, Heating

Eight page, two color booklet lists packaged, split system, and commercial air conditioning; gas and oil fired heating; heat pumps; and electronic air purifiers. Booklet contains specifications and is illustrated.—Airtemp Div., Chrysler Corp.

573 Packaged Air Conditioners

"PAC" catalog 6022 describes new line of packaged air conditioners available in 10, 15, 20, 25 and 30 hp capacities. The 20, 25 and 30 hp models have dual compressors. Complete details include features, accessories, capacity and dimensional data, specifications and piping and wiring diagrams.—Dunham-Bush, Inc.

574 Packaged Water Chillers

Vilter "Uni-Chiller" packaged water chillers for refrigerant 22 in sizes from 25 through 125 nominal tons are described. All major components, including VMC reciprocating compressor, flooded or direct expansion chiller, condenser and control package, illustrated and described in eight page bulletin. — The Vilter Mfg. Co.

575 Remote Air Conditioning Units

Eight page bulletin 230 gives complete dimensional and capacity information about new line of remote horizontal air conditioning units. Units can be supplied for both heating and cooling using steam, water, and direct expansion. Cooling capacities range from 2 to 15 tons. — Bohn Aluminum & Brass Corp., Danville Div.

576 Remote Air Conditioning Units

Bulletin 3355 describes Marlo "Seazonaire" remote room air conditioning units for multi-room installations available in six standard types, floor or ceiling mounted, finished or recessed cabinet, capacities from 210 to 1260 cfm. Includes construction details, specifications and installation drawings.—Marlo Coil Co.

577 Roof Mounted Air Conditioning

"Atmos-Pak" roof mounted, year 'round air conditioning system, available in capacities 5 through 35 tons, complete with supply and return air distribution chamber, described in bulletin. No field assembly required.—Air Conditioning, Inc.

578 Roof Top Heating and Cooling Unit

Mammoth's YR series is completely enclosed weatherproofed "Compact-Aire" roof top heating, cooling unit for outdoor installation. Described in bulletin YR-460. Available in four sizes with Btu outputs, gas or oil, from 150,000 to 500,000. Coil space, blower capacities to handle any standard cooling equipment from 3 to 20 tons. — The Mammoth Furnace Co.

579 Self-Contained Air Conditioners

Specification sheet SP-362, A,B,C,D on self-contained "Climate Changer" covers such features as heavy 18 gage furniture steel casings treated to resist rust. Hermetic compressor motor is assembly sealed at factory against moisture, air or dirt and mounted on vibration isolators. Discharge chamber is complete with four-way adjustable airfoil front discharge grille.—The Trane Co.

580 Self-Contained Air Conditioners

Self-contained air conditioners complete with built-in evaporative condensers, water cooled con-

densers or for use with air cooled condensers, ranging in size from 3 to 60 tons. — United States Air Conditioning Corp.

581 Through-the-Wall Air Conditioner

Self-contained through-the-wall Modine "Airditioner" provides year 'round heating or cooling by utilizing a fully hermetically-sealed refrigerant cycle combined with heating coils for connection to hot water or steam systems. Models are available with electric heating element if desired. Two sizes, 1 and 1½ ton.—Modine Mfg. Co.

582 Unitary Air Conditioning

Catalog section 60 describes articulated units of unlimited capacities through and beyond 100,000 cfm, designed and manufactured to incorporate all the equipment necessary for a central station as required. Optional indoor or outdoor weatherproof construction.—Air & Refrigeration Corp.

583 Unitary Air Conditioning

Four page booklet describes commercial application of unitary air conditioning equipment available in six sizes from 2 to 10 hp.—Janitrol Heating & Air Conditioning Div., Midland-Ross Corp.

584 Year-Round Air Conditioner

Quality, year-round Webster "Newport" air conditioner unit, self-contained cooling cycle, is described. Heating is connected to conventional hot water, steam or electric heating system. Individual control of heating and cooling in every unit—select comfort with flip of a switch. Ideally suited to any multi-room application. — Warren Webster & Co., Inc.

Unit Heaters & Unit Ventilators

585 Air Make-Up Units

Bulletin 880 describes and illustrates Aerovent's gas fired and steam or hot water air make-up units for roof or wall type mounting in various capacities and pressure conditions. Also included is design, control and application data with additional information on filtered air supply and air heater units.—Aerovent Fan Co., Inc.

586 Commercial Range Hood Ventilation

"Filtaire" commercial range hood ventilator collects grease, smoke, heat, odors from commercial ranges, fryers, etc., by range-level blower pressure. Eliminates roof fan. Self-contained unit with filter, blower, motor, cabinet. Easily installed. Grease filter efficiency 96-98.6 percent. Copper mesh prevents transmission of flame. Models for 1000, 2000, and 3000 cfm.—Morrison Products, Inc.

587 Electric Unit Heaters

Four page bulletin 809 gives complete specifications and construction information on the Ilg line of electric unit heaters with capacities of from 1½ to 36 kilowatts. Offers simple solutions to a number of difficult heating problems.—Ilg Electric Ventilating Co.

588 Gas Fired Fresh Air Supply Heaters

Bulletin GFAS-60 describes Wing direct gas fired fresh air supply heaters of unitized construction, factory pre-wired and piped ready for installation. They are made in five sizes suited for wall or roof inlet and offer up to 50,000 cfm and 4,500,000 Btu per hr output.—L. J. Wing Mfg. Co., Div. of Aero Supply Mfg. Co. Inc.

589 Gas Fired Heaters, Duct Furnaces

General catalog SA-5900 describes the complete line of Reznor gas-fired unit heaters, duct furnaces, heavy duty heaters, blower fans and the new Reznor motorized flue exhauster. Dimensions, performance data and application suggestions are included. — Reznor Mfg. Co.

590 Gas Fired Vertical Unit Heaters

Gas fired industrial type vertical delivery unit heaters can be installed up to 36 ft above floor, are available in 300,000, 450,000, and 600,000 Btu per hr sizes. Largest weighs but 680 lb. All have stainless steel burners. For straight heating or on applications where outside air is introduced for make-up. AGA approved.—Modine Mfg. Co.

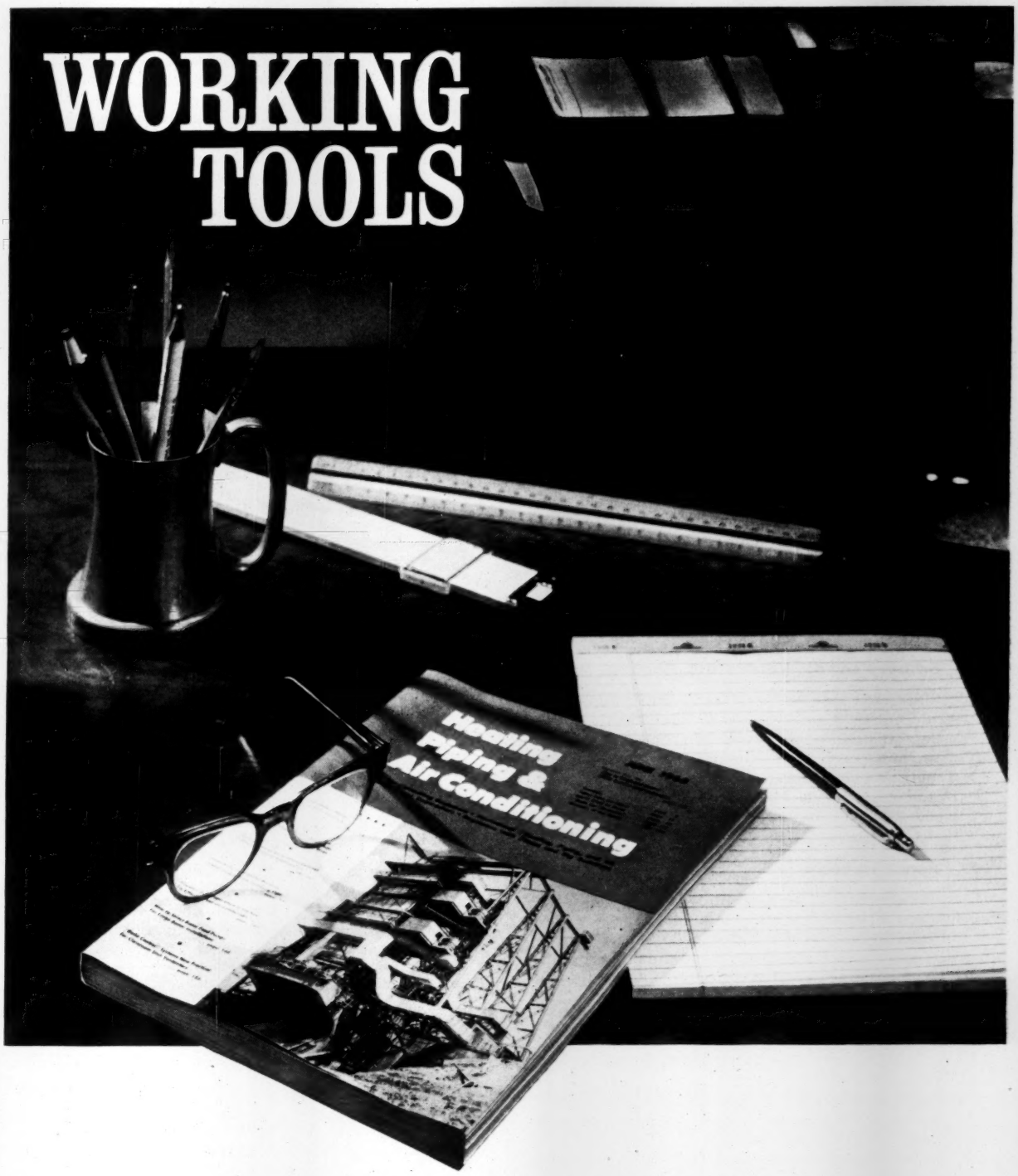
591 Horizontal Direct Fired Heaters

Four page bulletin JAS 460 describes Johnson model JAS factory assembled heating units and duct heaters for oil or gas, with exclusive counterflow "Aire-tube" design in wide range of sizes 152,000 to 1,000,000 Btu for many varied applications. Standard ratings, dimensional data and standard equipment shown.—Johnson Heater Corp.

592 Horizontal Unit Heaters

Bulletin 552 describes compact propeller type unit heaters featuring "Steelfin" coils for steam or hot water heating, available in 11 sizes with air capacities from 400 to 5300 cfm, and heating capacities from 31 to 300 mbh. For commercial, institutional and industrial space heating. Vertical unit heaters also available.—The New York Blower Co.

WORKING TOOLS



Pictured above are some familiar working tools of heating, air conditioning, piping and ventilation men.

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593 Industrial Direct Fired Heaters

New application manual for industrial direct fired heaters covers survey procedures, transmission factors, conduction, infiltration, exhaust calculations, estimating factors, open door loading heating, fuel pipe designing, process heating, calculations, make-up air systems, high temperature psychrometric charts, conversion tables, reference data.—Lennox Industries Inc.

594 Revolving Unit Heaters

Bulletin HR-6A describes Wing downflow unit heaters with revolving or fixed discharges. Heaters are available in wide range of sizes for mounting heights from 8 to 60 ft and over. Capacities up to 1,209,000 Btu per hr. For steam or hot water.—L. J. Wing Mfg. Co., Div. of Aero Supply Mfg. Co. Inc.

595 Roof Ventilators

Engineering data and capacity ratings are given for low silhouette roof ventilators for virtually all applications. Rotary, stationary, directional, continuous ridge, unit, axial hooded and axial vertical exhaust types. Also, multi-purpose units that offer gravity, power, supply or exhaust as well as combination ventilator-skylight units of various designs are described.—Western Engineering & Mfg. Co.

596 School Heating, Ventilating, Cooling

Illustrated bulletin describes in detail application of Lennox "Comfort Curtain" equipment for heating, ventilating and cooling classrooms. Specific sections cover air distribution, two classroom and in-the-room systems; central warm air, hot water and steam; electric heating; heat pump; air conditioning; and controls.—Lennox Industries Inc.

597 Space Heaters

Bulletin 580-13 contains drawings and specifications for space heaters with output capacities from 200,000 to 500,000 Btu per hr. The "Paraflo" heater is used principally in medium sized industrial buildings, commercial and institutional buildings.—Dravo Corp.

598 Space Heaters

Bulletin 580-12C describes features of "Counterflo" space heaters ranging in output from 400,000 to 2,000,000 Btu per hr for a wide range of industrial applications. Drawings, specifications and other engineering data included.—Dravo Corp.

599 Space Heaters

Catalog 2659 illustrates and fully describes how to efficiently space heat in buildings with high ceilings. Sixteen pages include technical data, mounting heights, spread circle diameters, unit capacities of 30 sizes, specifications, and dimensional drawings. Complete charts, tables and graphs also included. — Young Radiator Co.

600 Unit and Blast Heaters

Revised catalog GP 956-R4-1-60 describes "Grid" cast iron steam heat transfer surface unit heaters (both horizontal and down blow), blast heaters and radiators, and discusses corrosion in unit heaters. Describes and illustrates one piece construction high test cast iron heating sections, together with air distribution charts, heating capacities, conversion tables, etc.—D. J. Murray Mfg. Co.

601 Unit Heaters

Buffalo Forge unit heater model C is streamlined and attractively finished to harmonize with modern commercial and industrial installations. Heating element of one piece seamless copper tube with square fins provides maximum radiation. High efficiency fans offer greater capacity with less noise. Thirty-one sizes.—Buffalo Forge Co., Air Handling Div.

602 Unit Heaters

Eight page bulletin UH858 on Grinnell unit heaters presents information, illustrations of gas fired and steam or hot water unit heaters for variety of applications. Sound rating recommendations for typical environments, guides for unit selection, installation, location are provided with data on two-speed motor operation, velocity nozzles, vertical delivery. — Grinnell Co., Inc.

603 Unit Heaters

Sixteen page folder describes complete line of unit heaters, ceiling and floor mounted, propeller and blower types.—Janitrol Heating & Air Conditioning Div., Midland-Ross Corp.

604 Unit Heaters

Wilson unit heaters, available in six models in capacities 60,000 to 717,000 Btu, are described in bulletin 60. Unit heater is completely dependable in service where corrosive atmospheres are encountered. Uses directional finned radiation. — Wilson Engineering Corp.

605 Unitary Air Conditioners

More than 175 units listed on "Galaxy" reference chart. Included are 136 air conditioning products, 49 gas and oil fired furnaces. Divided into three parts (unitary air conditioners, heat pumps, furnaces) chart gives series designation and specifications. This chart is designed for reference in determining the right unit for a particular job. — Typhoon Air Conditioning Div., Hupp Corp.

To simplify your requests for copies of the trade literature that is reviewed here, use the convenient postage-paid cards on pages 2-31 and 2-33. Heating, Piping & Air Conditioning will advise the manufacturers.

606 Volume Ventilators

Twenty-four page catalog 575 describes complete line of "Seasonvent" volume ventilators for all heating and ventilating applications, specifically for applications such as churches, auditoriums, libraries, and similar institutions where smooth and quiet air handling is a primary design consideration. Catalog covers features, applications, engineering specifications, selection and dimensional data.—McQuay Inc.

607 Warm Air and Direct Fired Heating

Bulletin 31b provides complete specifications and dimensions on heavy duty heaters for all fuels in capacities from 225,000 to 3,150,000 Btu.—Campbell Heating Co.

Valves, Fittings & Flanges

608 Automatic Regulating Valves

Catalog 54 and individual bulletins describe automatic regulating valves for the control of steam, air, water, gas, etc.—Klipfel Valves, Inc.

609 Bar Stock Valves

Catalog DH-766-B describes bar stock close control valves, precision turned from high grade bar stock metals and capable of withstanding a wide range of working temperatures and pressures; gives illustrations and dimension tables on the various styles and sizes.—R-P&C Valve Div., American Chain & Cable Co., Inc.

610 Branch Connection Fittings

Bulletin TF-1 introduces "W-S Fishmouth," new way to make branch connections. Fully machined to shape from schedule 40 pipe, fits perfectly with run pipe. Sizes 2 in. and up. "W-S TeeLet," sizes ⅛ to 1½ in., designed to give low cost connections for high pressure, small branch pipe applications. — "W-S" Fittings Works, H. K. Porter Co., Inc., Forge and Fittings Div.

611 Bronze Gate Valves

Two page circular 574 illustrates and lists features of many types of bronze gate valves — screwed, solder or flange ends; ¼ to 3 in. sizes; rated at 125 lb SP, 200 lb WOG and 150 lb SP, 300 lb WOG. — The Lunkenheimer Co.

612 Bronze Globe Valves

Four page circular 602-2 describes the two pressure classes of LQ600 bronze globe valves with patented "Brinalloy" seats and discs. It details features and sizes of Fig. LQ600-150 valve, rated at 150 lb SP, 30 lb WOG; and Fig. LQ600-200 valve, rated at 200 lb SP, 550 F, 400 lb WOG. — The Lunkenheimer Co.

613 Bronze Valves

Thirty-six page catalog VC-3 is devoted to low pressure and pressure rated valves, solder end and threaded, gate, globe, boiler drains, stop and stop & waste. A chart shows flow characteristics, and valve installation pointers are given. — Nibco Inc.

614 Butterfly Valves

Eight page illustrated bulletin 583 describes low and high pressure wafer type, single flange butterfly valves for manual or automatic control and shut-off. Available in metal-to-metal seated and elastomer, resilient seated types. Pressure tables make valve selection easy.—W. S. Rockwell Co.

615 Butterfly Valves

Four page bulletin 590X describes resilient seated type butterfly valves for application where positive, drop-tight closure is required. Valves are easy to install, self-cleaning, corrosion resistant, no fouling, have less weight, require less space.—W. S. Rockwell Co.

616 Check Valves

Technical bulletin CH-100-A describes a multi-duty check valve engineered for the heat pump featuring teflon seats. Will not chatter even under very low flow. Instant-acting for extremes of temperatures and pressures. Hermetically sealed. Ten million cycles at 350 psi show no appreciable wear. Range is ½ through 20 tons. — Chatleff Valve & Mfg. Co.

617 Check Valves

Eight page bulletin describes basic units which, when combined with standard pipe fittings of almost any type, form complete check valves suitable for a wide variety of services. Included are construction details, ratings, and a table of sizes and dimensions. Illustrations show use with different pipe fittings, tanks and pressure vessels.—Durabla Mfg. Co.

618 Check Valves

Two page circular 588 illustrates and lists, with specifications, many types of check valves — bronze, iron and steel — for boiler feed lines; for air, water and steam lines; and for controlling chemical and gaseous fluids. — The Lunkenheimer Co.

619 Check Valves

New 16 page catalog 162 describes "Streamflow" center guided check valves in sizes 1 through 20 in. for pressures from 125 through 2500 lb. Available in cast iron, cast steel, stainless, bronze, aluminum and other alloys. Features described and illustrated, specifications and dimensions tabulated.—Miller Valve Co., Inc.

620 Copper Pipe and Tube Fittings

Fittings and accessories for copper pipe and tubing, solder, flanges, and flared, are the subject of 92 page catalog I. There are sections on wrought copper fittings, cast solder fittings, cast drainage fittings, flared tube fittings, flanged fittings, heating specialties, and accessories. — Nibco Inc.

621 Copper Tube Fittings and Valves

A 112 page catalog of Anaconda tube fittings and valves includes roughing-in measurements and suggestions for installation. Detailed information is given on all types of wrought copper and cast brass fittings as well as cast brass valves, flanged fittings and accessories.—Anaconda American Brass Co.

622 Corrosion Resistant Fittings

Twenty-four page bulletin on Speedline corrosion resistant fittings includes engineering data, details on complete line of stainless steel "long tangent" pipe fittings, ½ through 4 in., for light-wall schedules 5 and 10 process piping. Information on butt welding, socket joining and use of unique Speedline insert flange.—Speedline Fittings Div., Horace T. Potts Co.

623 Corrosion Resistant Welding Fittings

Catalog describes dimensions and analyses and gives corrosion tables for corrosion resistant welding fittings. — C. A. Roberts Co.

624 Diaphragm Valves

Grinnell-Saunders diaphragm valve catalog S-V-60, 48 pages, describes and illustrates their exceptional fitness for handling materials which are corrosive, viscous, fibrous, solids in suspension, liquids, gases and semi-fluids, under pressure or vacuum. Exclusive construction features, wide choice of body, linings and diaphragm materials; long life, simple maintenance. — Grinnell Co., Inc.

625 Diaphragm Valves

Two page illustrated sales bulletin 344-S has schematic drawings for suggested applications of Powers "Flowrite" premium quality single seat diaphragm valves.—The Powers Regulator Co.

626 Diaphragm Valves

Four page illustrated bulletin 800C shows how rubber diaphragm is used for positive sealing and rubber covered metal disc for positive closure, assuring longer diaphragm life and lower maintenance in corrosive, abrasive, vacuum and other service.—W. S. Rockwell Co.

627 Dual Purpose Balancing Valve

Bulletin 204 describes new dual purpose balancing valve with a built in "memory." How it works and construction and operation of the "Illinois" hot water valve is explained and illustrated. New valve does the job of both a balancing and cut-off valve, saves on space, labor and material costs, as described in this bulletin.—American Air Filter Co., Inc.

628 Eccentric Plug Valve

Bulletin AE 1059B describes new eccentric plug valve featuring minimum number of parts, is non-lubricated for little maintenance, maximum pipe opening with special elastomer-covered plug for bubble-tight sealing, no packing required, design eliminates ordinary bonnet assembly. Working pressure 150 lb; available in sizes ½ through 12 in. (larger on application).—W-K-M Div. of ACF Industries, Inc.

629 Eccentric Valves

Eight page bulletin 110 describes the eccentric principle under which DeZurik valves are designed. It also lists the dimensions, wide variety of materials, etc., of the manually-operated DeZurik valves, used on air conditioning installations. — DeZurik Corp.

630 Forged Stainless, Alloy, Carbon Fittings

Application of "W-S" high pressure (2000, 3000, 6000 lb) pipe fittings and eight types of unions described in bulletin A3-S1. Data on screw end and socket welding, ⅛ to 4 in., stainless, alloy and carbon steel fittings includes dimensions and weights. Thirty-two pages (includes eight pages of engineering specifications, data.) — "W-S" Fittings Works, H. K. Porter Co., Inc., Forge and Fittings Div.

631 Forged Steel Unions

Specifications of screw end and socket welding, ⅛ to 3 in., unions for high pressure, high temperature applications given in bulletin U-2. Dimensions and weights of forged steel unions, tongue and groove and O-ring flange unions, also orifice, tab orifice, clamp ring, insulated, 2-lug nut and "4-Star" lug nut unions. — "W-S" Fittings Works, H. K. Porter Co., Inc., Forge and Fittings Div.

632 Gate Valves

Four page supplement H to catalog VC-3 covers "Husky" gate valves with buna-N conical type gate. Will throttle. Construction features are described and illustrated and dimensions are tabulated. Ratings and uses are shown in this supplement.—Nibco Inc.

633 Globe and Angle Valves

Four page circular covers Powell bronze "WS" "Full Flow" and "Visual Control" globe and angle valves, for 150,200,300 lb pressure with such advantages as practically full flow through the valve with minimum pressure drop and turbulence. Valves are illustrated, described, and all dimensions of available sizes are given.—The Wm. Powell Co.

634 Instrument Plug Valves

Bulletin SC-60 on two way bar stock valves which combine features of larger "Tufline" valves with construction economy are available in ¼ through 1 in. size, 300 lb class, screwed end, 303 or 316 stainless metals. Three way cast body counterpart with bottom entry third port is available ¼ through ½ in., 300 lb class, screwed ends in 316 stainless steel metal.—Continental Mfg. Co.

635 Light Wall Stainless Fittings, Flanges

Bulletin TT 944 illustrates methods of joining schedules 5S and 10S fittings and pipe, including "rolled in" assemblies with unique rotating insert flanges. Described is "Pipe-Mate" line of light wall tangential stainless steel fittings and flanges for moderate service process piping. Chart gives information on dimensions, design properties, dimensional tolerances.—Tube Turns, Div. of Chemetron Corp.

636 Light Weight Fittings, Flanges

Bulletin TT 942, "Fittings and Flanges for Light Weight Piping," describes the four way savings obtainable with light weight carbon steel piping. Dimensions are given for light weight welding fittings and exclusive 125 lb forged steel light weight taper face welding neck flanges, available in sizes through 24 in.—Tube Turns, Div. of Chemetron Corp.

637 Lubricated Plug Valves

Catalog 400 contains complete information on the full line of ACF semi-steel lubricated plug valves, sizes ½ through 30 in., pressure ratings 175 through 800 lb WOG. Details on accessories, special valves and lubricants also included. — W-K-M Div. of ACF Industries, Inc.

638 Lubricated Service Cocks

A 12-page catalog, V-605, contains complete information on Rockwell lubricated service cocks, lubricants, and accessories.—Rockwell Mfg. Co.

639 Moisture-Liquid Indicators

Bulletin 60-2021 covers "Dri-Vue" moisture-liquid indicator for detecting objectionable acid creating moisture in refrigerant systems. Spells "wet" or "dry" in addition to usual color variation. Large visual element area. Available in single or double port types with connection size range ¼ in. flare to 2⅛ in. OD solder.—Henry Valve Co.

640 Motorized Valves

Four page bulletin V 100-5B on "Au-Temp-Co" motorized valves with oil immersed reversing motors for controlling flow of steam and noncorrosive liquids. Used for zone control of heating systems; control of heating, ventilating, and air conditioning systems; control of mediums to coils or sprays, industrial installations, processing, etc. Dimensions and pressures given.—Heat-Timer Corp.

641 Non-Lubricated Plug Valves

Bulletin SC-60 describes "Tufline" non-lubricated plug valves with through flow quick, visual operation. Self-lubricating, chemically inert "Teflon" separates moving parts to avoid galling, permits tight sealing. Available in variety of metals ¼ through 8 in., 150 and 300 lb for on-off service, light or heavy media.—Continental Mfg. Co.

642 Packless Valves

Robertshaw packless valves in many types and sizes are described in catalog F. Multi-ply seamless metal bellows assures longer life, greater flexibility. Brass, steel, stainless steel materials. Seating materials selected for best performance on required service. For high vacuum service. Also pressures to 500 lb at temperature of 1000 F. — Fulton Sylphon Div., Robertshaw-Fulton Controls Co.

643 Pipe Line Strainers

Bulletin 2000 describes Y type strainers for steam, air, oil, gas, water. Includes photographs, drawings, dimensions for screwed strainers ¼ to 2 in. —Frank D. Riggio Co., Inc.

644 Pipe Line Strainers

Manual 957 describes the complete line of Zurn LPD "low pressure drop" pipe line strainers. Covers in detail duplex, "Sinlex" and "Y" type strainers plus a section on special purpose pipe line strainers. Includes photographs, engineering drawings, dimensions, and pressure drop charts. Time saving information on proper ordering is also included. — Zurn Industries, Inc., Fluid Control Div.

645 Piping for Nuclear Applications

Twenty page illustrated brochure 60A, "Critical Piping for the Nuclear Age," describes piping, fittings, flanges, piping fabrication and erection work performed by Midwest Piping Co. for nuclear piping systems.—Midwest Piping Co., Inc.

646 Plug Valves for Air Conditioning

How ACF lubricated plug valves can save maintenance, operating and installation costs in air conditioning systems is described in bulletin AP 1059. Dimensional data and other information on these valves is also included. — W-K-M Div. of ACF Industries, Inc.

647 Polyethylene Pipe and Fittings

Four page brochure on "Polyfusion" illustrates the step by step operation of joining "Vulcathene" polyethylene pipe and fittings to give permanent leakproof joints for acid waste and drainage systems.—American Vulcathene Div., The Nalge Co., Inc.

648 Radiation

Condensed catalog containing two pages of information on each model of Shaw-Perkins "Panel-Vector" and "Airadiator" radiation. Descriptions, specifications, dimensions, ratings, etc. are included. Offers full literature on each model. — Shaw-Perkins Mfg. Co.

649 Refrigerant Filter-Driers

Bulletin V-87 covers "Dri-Cor" refrigerant filter-drier for removing moisture, moisture created acids, other objectionable matter. Multiple cartridge and sealed types. Features molded core plus granular desiccant for balanced two-stage drying and progressive filtration. Capacity 1 to 165 tons. Connections ¼ in. flare to 2⅛ in. OD solder.—Henry Valve Co.

650 Regulators

Steam capacity and flow data and formulas enable calculation of fluid flow rates in pipes at given velocities. Steam velocity chart and recommended capacities for Spence temperature and pressure regulators are given in illustrated condensed catalog 350. — Spence Engineering Co., Inc.

651 Remote Operation of Valves

For those concerned with valves and piping, bulletin sheet details Babbitt adjustable sprocket rim with chain guide, a simple device for remote operation of overhead or otherwise out-of-reach valves. Gives price list, ordering directions and cites accident reduction, waste prevention and simplification of piping layout.—Babbitt Steam Specialty Co.

652 Renewable Composition Disc Valves

Circular U-01 describes bronze globe, angle, lift check, and stop-and-check valves with renewable composition discs. Valves carry pressure rating of 150 lb SWP and feature quick replacement of discs. Types of discs available for these valves to accommodate different services are described.—The Fairbanks Co.

653 Renewable Disc Valves

Bulletin DH-119 describes renewable disc bronze globe and angle valves with composition disc rings, and includes service recommendations.—R-P&C Valve Div., American Chain & Cable Co., Inc.

654 Reversing Valves

Design of reversing valves features a full seating system. Few moving parts. Dense brass movement and teflon seating give extreme durability and life. Dual tube construction and full seating design protects user against efficiency loss from heat exchange and leakage. Range is 1 through 20 tons. — Chatleff Valve & Mfg. Co.

655 Reversing Valves for Heat Pumps

Solenoid operated, instantaneous reversing valves for 3, 5 and 7½ ton heat pump air conditioning systems.—Ranco Inc.

656 Saddle Fittings

Four page brochure describes pre-shaped saddle fittings for branch connections in both 45 and 90 deg. Comparative cost chart shows benefits in dollars and cents between forged fittings and pre-shaped fittings. Specification chart for easy ordering with sample order blank shown, plus supplemental equipment and "how to install" in three steps.—Allied Piping Products Co.

657 Safety Devices and Controls

Sixteen page condensed catalog illustrates and describes complete line of heating and plumbing safety devices and controls. Describes operation and function of each product, giving necessary operating data, dimensions, weights, ranges, and settings. — Watts Regulator Co.

658 Safety and Relief Valves

Catalog 700B, 144 pages, covers ranges, sizes, material, selector and capacity charts for "Consolidated" safety and relief valves in capacities that cover the entire range of industrial demands. Valves are furnished in bronze, iron and steel in industrial, marine and domestic designs.—Manning, Maxwell & Moore, Inc.

659 Seamless and Welded Welding Fittings

Twelve page bulletin 60-C describes new line of seamless butt welding fittings, now offered in addition to extensive line of welded type fittings. Manufacturing procedures, size ranges and types of available fittings — both stock and special — are listed and illustrated, together with a description of metallurgical and dimensional controls. — Midwest Piping Co., Inc.

660 Seamless Welding Fittings, Flanges

Eight page brochure FB 502A covers carbon, alloy and stainless steel seamless welding fittings and flanges, illustrates those commonly produced and lists sizes and types available. Contains charts of standard sizes and schedules according to ASA B36.10 and ASA B36.19.—Babcock & Wilcox Co., Tubular Products Div.

See pages 2-31 and 2-33 for convenient reply cards you should use to request copies of these bulletins.

661 Seamless Welding Fittings, Flanges

A set of 24 folders (FDC 252 to 275) contain dimensional and physical information on welding fittings and forged steel flanges in carbon and alloy steel (ASA B36.10), and stainless steel (ASA B36.19). Each folder contains the full range of information on one size. Folders cover ½ through 36 in.—Babcock & Wilcox Co., Tubular Products Div.

662 Semi-Steel Valves

A 44 page catalog, V-203 Rev. 1, contains information on complete line of Rockwell-Nordstrom lubricated plug valves, straightway, multiport, locking devices, wrenches and lubricants and gives complete sizes and specifications on all applicable patterns and accessories.—Rockwell Mfg. Co.

663 Steel Pipe Couplings

New bulletin gives sizes, lengths, threads, weights and carton contents of Wheatland merchant, half and API line pipe couplings plus other information, with complete specifications on steel pipe, including standard, extra strong, double extra strong and structural pipe. Illustrated, and printed in two colors on durable stock. — Wheatland Steel Products Co.

664 Threadless Valves

Eight page brochure describes solder end valves for use with types K, L and M copper tubing; "Fairco-Braze" valves for silver brazed joints on monel, brass and copper nickel pipe and type B copper tubing. Pressure ratings of solder end valves through 150 lb and "Fairco-Braze" valves through 200 lb.—The Fairbanks Co.

665 Three, Four, Five Way Plug Valves

Bulletin SC-60 describes "Tufline" three way, non-lubricated plug valves designed with bottom entry third port for maximum sealing and flow. Available in ½ through 6 in., 150 and 300 lb class. Four and five way valves are furnished in ½ through 2 in., 150 lb. Multi-port designs available in variety of metals.—Continental Mfg. Co.

666 Union Bonnet Gate Valves

Four page circular features new line of bronze union bonnet gate valves for 125 lb at 500 F (200 WOG), and 150 lb at 500 F (300 WOG). The valves are shown and dimensions of all available sizes, ¼ to 3 in. inclusive, are given.—The Wm. Powell Co.

667 Unions, Union Fittings

Circular D-1 describes "Dart" malleable iron union and union fittings made with bronze to bronze seats ground to a true ball joint and guaranteed to give a drop tight seal. Also included is an all-iron "Dart" union recommended for services where bronze seats are not suitable.—The Fairbanks Co.

668 Valves

Condensed catalog sheets list low pressure globe and angle valves (1409-V), standard pressure globe and angle valves (1413-V), gate valves (1412-V), check valves (1411-V) and radiator and bypass valves (1410-V).—Ohio Brass Co.

669 Valves

Twenty-four page, fully illustrated booklet describes gate, globe, angle, check, "Y" valves, etc., for handling water, oil, gas, air, steam and corrosive fluids. Covered are Powell bronze, iron, steel and corrosion-resistant valves; their available sizes and pressure and temperature ratings are listed.—The Wm. Powell Co.

670 Valves

Catalog 10 shows illustrations, condensed descriptions and specifications on bronze, forged steel and iron gate valves; bronze and iron globe and angle valves; bar stock valves; and cast steel valves.—R-P&C Valve Div., American Chain & Cable Co., Inc.

671 Valves and Controls

Catalog contains installation, application, tabular and descriptive information for sizing and selecting thermostatic expansion valves, refrigerant distributors, solenoid valves, suction line regulators, hot gas bypass valves, float switches, high side float valves, evaporator controls and reversing valves for all refrigerants and all types of applications.—Alco Valve Co.

672 Water Diverting Valve

Technical bulletin V-101 describes "Vectrole" V-58 electric water diverting valve offering the following features: Dense brass construction. Silent, non-liming moving parts. Balanced resistance to flow in either position. Range from 0 to 10 gpm. Simple, compact, field serviceable. On-off operation for automatic summer-winter convector control. — Chatleff Valve & Mfg. Co.

673 Water Pressure Reducing Valves

Bulletin 553A gives complete data on Leslie "Hi-Flo" water pressure reducing valves. Explains how proper valve selection and application can reduce hidden water costs.—Leslie Co.

An index by manufacturers whose catalogs, bulletins and other literature are described in this supplement to Heating, Piping & Air Conditioning appears on the back cover (page 2-64.) It shows the item numbers for each of the companies.

Page numbers for the general classifications into which the items are grouped are given in the index on the front cover.

674 Zone Heat Control

Four page bulletin describing and illustrating features, applications, and sizes of "Zonvalve" zone heat control for steam, hot water, and chilled water systems. Each room or zone in building is individually temperature controlled with only a single burner or circulator. Radiator, convector and zone supply line installations diagrammed.—Heat-Timer Corp.

675 Zone Valve for Heating and Cooling

Bulletin 76-8028 on new Honeywell V8031 hydronic zone valve for heating and cooling enumerates all the quality features of this new economy valve. Shows costs of two and three zone systems using this valve compared with single zones and with circulator systems. Illustrates related thermostats and gives complete specifications.—Minneapolis-Honeywell Regulator Co.

Warm Air & Direct Fired Heating

676 Automatic Coal Furnace

Four page descriptive brochure on the "Combustioneer" packaged coal fired forced warm air furnace for small residential application includes specifications for this unit.—Bituminous Coal Equipment, Inc.

677 Automatic Rotary Burners

These fully automatic Johnson burners are built with metering pump, three-way magnetic oil valve and suction pump to provide sure, smooth automatic starts even after lengthy shutdown. Available in models for firing on oil only, gas only, or combination-oil-and-gas. Nine sizes, 28 to 560 hp. — S. T. Johnson Co.

678 Bulletin on Heating

Equipment for residential and commercial heating, forced air and boiler operation, gas or oil fired, steam or hot water is described in a comprehensive bulletin.—Welbilt Air Conditioning & Heating Corp.

679 Combination Oil and Gas Burners

These Johnson burners enable use of either fuel as price and convenience dictate. A flick of the switch makes the complete change-over from one fuel to the other. This switch can be controlled either manually or automatically. Produces real fuel economies. The equipment is available in nine sizes for every heavy-duty need. — S. T. Johnson Co.

680 Direct Fired Heaters

Industrial direct fired, UL approved Arkos heaters designed for burning gas, oil, or combination fuels range in capacities from 400,000 to 3,500,000 Btu output and are available for floor, horizontal or inverted mounting. Large NAFM certified blowers deliver more air at lower rpm and lower horsepower. Completely wired, assembled and flame tested before shipment.—Arkos Mfg. Co.

681 Direct Fired Heaters

Four page bulletin 502 describes Arkos direct fired heaters available in eight floor mounting models to 550,000 Btu and eight suspended models to 550,000 Btu. Features of both types are described and illustrated and dependability and fuel economy are discussed. Dimensions and specifications are included. — Arkos Mfg. Co.

682 Direct Fired Heaters

Four page bulletin J-557 describes and illustrates model FA "Fyre-tube" packaged heating units for oil or gas and the many types available in sizes of 350,000 to 4,000,000 Btu for industrial and commercial applications. Factory assembled, wired and flame tested. FA 360 two-page insert shows standard specifications, dimensions and rating data.—Johnson Heater Corp.

683 Direct Fired Make Up Air Units

Four page data bulletin 552-1-60 on National "Champion" MA direct fired make up air units. Complete specifications described and illustrated. Standard packaged units either 90 or 45 deg rise, others available on request.—National Heater Co.

684 Direct Fired Space Heaters

Four page bulletin J858 describes 15 sizes of model JA "Aire-tube" heaters from 400,000 to 5,000,000 Btu capacity fired with gas, oil or combination of both. Exclusive construction features and revolutionary air rotation heating in large areas is explained, along with ratings and dimensional data.—Johnson Heater Corp.

685 Direct Fired Space Heaters

Booklet C-658 provides drawings of typical installation arrangements of "Commercial-Aire" direct fired heaters in the 300,000 to 2,000,000 Btu output range. This reference booklet provides the user a wide variety of proven design applications for commercial and industrial forced air systems. — The Mammoth Furnace Co.

686 Forced Draft Burners

Forced draft "Package" burners provide smooth, efficient operation regardless of stack conditions, firebox pressures. Come completely assembled, wired, tested, ready to install. Powered by Johnson 53 burners in sizes 28 to 560 hp. Models for oil, gas, or combination oil and gas firing. Produce maximum efficiency at minimum fuel cost. — S. T. Johnson Co.

687 Furnaces

More than 175 units are listed on "Galaxy" reference chart. Included are 136 air conditioning products and 49 gas and oil fired furnaces. Divided into three parts (unitary air conditioners, heat pumps and furnaces) chart gives series designation and specifications. Designed for easy reference in determining the right choice of a unit. — Typhoon Air. Conditioning Div., Hupp Corp.

688 Gas Fired Heaters, Duct Furnaces

General catalog SA-5900 describes the complete line of Reznor gas fired unit heaters, duct furnaces, heavy duty heaters, blower fans and the new Reznor motorized flue exhauster. Dimensions, performance data and application suggestions are included. — Reznor Mfg. Co.

689 Gas Fired Unit Heaters

Roberts-Gordon catalog gives details on extensive line of oil and gas fired cast iron boilers, oil and gas fired furnaces, central air conditioning units, conversion and industrial gas burners and gas fired unit heaters. Sizes and designs for domestic heating, industrial, institutional and commercial applications. — Roberts-Gordon Appliance Corp.

690 Horizontal Suspended Furnaces

Bulletin 59S-1 offers dimensional and engineering data for "Compacto" horizontal suspended furnaces available in oil or gas with outputs from 185,000 to 450,000 Btu. Six different designs are presented, including four which utilize oversize blowers, bypasses or a combination of both, for combination heating-cooling systems, or air make-up applications. — The Mammoth Furnace Co.

691 Oil, Gas, Combination Fuel Heaters

Six page data bulletin 550-1-60 on National "Champion" heaters for oil, gas, or combination fuels for space heating, tempering, make up air and drying. Features (including "Teardrop" design stainless steel combustion chamber) described and illustrated, and ratings are given. Btu outputs from 400,000 to 4,000,000.—National Heater Co.

692 Registers, Grilles, Diffusers

Complete line of high quality products for any commercial or residential heating and/or cooling operation. Specializing in non-standard sizes and designs. Heavy gauge steel or aluminum in many eye appealing designs; air flow in any directional pattern.—A & A Register Co.

693 Space Heaters

Bulletin 580-13 contains drawings and specifications for space heaters with output capacities from 200,000 to 500,000 Btu per hr. The "Paraflo" heater is used principally in medium sized industrial buildings, commercial and institutional buildings.—Dravo Corp.

694 Stainless Steel Heat Exchangers

Technical data bulletins cover stainless steel heat exchangers. Included in the line is a wide variety of models, 45,000 to 480,000 Btu, vertical and horizontal, floor and suspended type furnaces and heaters.—Hayes Furnace Mfg. & Supply Co.

695 Stokers

Six page bulletin completely illustrates and describes industrial, commercial, and domestic stokers in 56 models with capacities of from 150 to 750 lb per hr. Includes installation drawings and specification tables.—Will-Burt Co.

696 Unit Heaters and Horizontal Furnaces

Specification sheet information on complete Mueller "Climatrol" unit heater line ranging from 25,000 to 250,000 Btu input. The gas fired unit heaters are shipped assembled, pre-wired and test fired. Horizontal oil and gas fired (with type 550 power burner) are available in sizes from 110,000 to 350,000 Btu input.—Mueller Climatrol Div. of Worthington Corp.

697 Warm Air and Direct Fired Heating

Bulletin 31b provides complete specifications and dimensions on heavy duty heaters for all fuels in capacities from 225,000 to 3,150,000 Btu.—Campbell Heating Co.

698 Warm Air Furnaces

Four page folder describes unit specially designed for addition of air conditioning.—Janitrol Heating & Air Conditioning Div., Midland-Ross Corp.

An engineer or contractor obviously can't find *all* the information he needs in catalogs, bulletins and manuals — but he *can* find a great deal of the information that he must have. Manufacturers of the hundreds and hundreds of products used in heating, piping and air conditioning offer you a wealth of useful data.

Water Treatment & Corrosion Control

699 Air Conditioning Cooling Water Treatment

Bulletin 117 describes advantages of chromate type liquid materials for prevention of corrosion and scale deposition in air conditioning cooling water systems. Use of a specially designed "Micro" chemical feeder which requires a minimum of attention is recommended to eliminate the necessity for manual daily chemical feeding.—The Bird-Archer Co.

700 Amines for Corrosion Control

Bulletin CP-100 describes advantages of amines in corrosion protection of steam and condensate return systems, with graphs and case histories. Bird-Archer's eight point water treatment service, designed to keep operating costs at a minimum and boost efficiency, is described.—The Bird-Archer Co.

701 Chemical Scale and Rust Removal

Booklet F-9688 describes chemical scale and rust removal with Oakite compound 32, inhibited liquid acid compound, and "Drycid", inhibited dry acid compound. Both designed for speed and safety and may be applied by circulation or soaking. Controlled descaling action protects against metal loss. —Oakite Products, Inc.

702 Control of Condensate Corrosion

Bulletin describes "Hagafilm", a film type amine designed to control condensate corrosion, clean out iron oxide deposits, increase heat transfer, reduce maintenance and replacements and protect steam system during standby. Built to fight corrosive producing effects of carbon dioxide and oxygen in condensate systems. Liquid or solid form. —Hagan Chemicals & Controls, Inc.

703 Corrosion Control for Cooling Water

Bulletin CSP-935 describes "Hagatreat", a complete corrosion inhibiting compound designed for treatment of recirculating cooling water systems in industrial plants and for the prevention of scale and sludge formation thereby making possible a greater concentration of make up water. Dry powder soluble in water. Solution feed recommended.—Hagan Chemicals & Controls, Inc.

704 Corrosion Inhibitor

Bulletin HSP-922 describes corrosion inhibitor CS, a non-chromate, non-staining product for air conditioning, high temperature hot water and process cooling water systems which is compatible with alcohol and glycol base antifreeze solutions. Controls corrosion on exposed iron, steel, copper, copper alloys, aluminum, brass and solder surfaces. —Hagan Chemicals & Controls, Inc.

705 Penetrating Oil

Heavy duty type "Eezit" penetrating oil works on draft regulators, parts of heating system, air conditioning, etc. Aerosol can with a jet high pressure spray.—The Tankit Co., Inc.

706 Preventing Lime Scale Formation

Service bulletin 58A describes Oakite "Airefiner 54" compound which prevents lime scale formation, inhibits algae and slime growth and controls pH of water to prevent corrosion. Easy to use, no odor, not toxic, contains no chromates and is not affected by heat.—Oakite Products, Inc.

707 Protecting Metal Surfaces

"Pioneer" metal protectors, fluid type mastics designed for the protection of metal surfaces, provide excellent protection against acid, alkali and salt corrosion, are waterproof, fungus proof and provide excellent abrasion resistance. Can be applied over bare, slightly oily, primed or painted surfaces. Surface need not be galvanized.—Witco Chemical Co., Inc.

708 Water Sampler for Boiler Blowdowns

Leaflet describes boiler water sampler suitable for boiler blowdowns to 900 psi and 750 F. Body is 4½ in. OD by 16 in. long. Coil contains 30 ft of copper tube. This sampler is available with stainless steel cooling coil when required. —Rempe Co.

This quarterly trade literature supplement to Heating, Piping & Air Conditioning describes catalogs, bulletins, and other data available, without obligation, to readers on request. The descriptions are grouped according to general classifications of subjects or equipment, as indicated on the front cover of this supplement.

Each month, regular editorial departments in Heating, Piping & Air Conditioning are devoted to Equipment Developments and to Recent Trade Literature announced by all manufacturers serving the field of heating, piping, and air conditioning.

Welding Equipment

709 Brazing Materials

Four page booklet JI-21998 tells how to specify and buy Westinghouse brazing materials.—Westinghouse Electric Corp., Welding Div.

710 Electrode Data

Thirty page booklet B-7589 gives pertinent information on Westinghouse mild and low alloy steel, cast iron and hard surfacing electrodes.—Westinghouse Electric Corp., Welding Div.

711 Selenium Rectifiers

Thorough report on rectifier that will not fail even under toughest welding conditions is given in a bulletin.—Miller Electric Mfg. Co.

712 Stud Welding Equipment

Six page catalog G9-18 describes line of Omark stud welding equipment, explains "Stored Energy" principle upon which system operates, illustrates portable and bench equipment available giving specifications. System is excellent for welding small studs to thin metal without burn or distortion, requires no special wiring, flux, ferrules, inert gas, etc.—Omark Industries, Inc., Fastening Div.

713 Welders

A resume of complete line of welding equipment, with photographs and descriptions, is given in bulletin entitled "The Full Line of Fine Welders."—Miller Electric Mfg. Co.

714 Welders

An account of the people who engineer, produce and sell Miller welders is given in brochure entitled "The Miller Electric Story."—Miller Electric Mfg. Co.

715 Welding Rods and Procedures

Catalog lists Anaconda welding rods for many oxyacetylene and arc welding purposes and suggests practices to be followed for a variety of alloy rods and applications. Included is a conversion table, and melting points and temperature colors of commonly used metals and alloys.—Anaconda American Brass Co.

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